<110> Victor Roschke

<120> 29 Human Cancer Associated Proteins

<130> PA004P1

<150> unassigned
<151> 2001-12-21

<150> PCT/US00/23794
<151> 2000-08-30

<150> 60/152,296
<151> 1999-09-03

<150> 60/158,003
<151> 1999-10-06

<160> 138

<170> PatentIn Ver. 2.0

<210> 1
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<212> DNA
<213> Homo sapiens

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tctccccgac tcctgaggtc acatgcgtgg tggtggacgt aagccacgaa gaccctgagg 180
tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 240
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agaaaaccat ctccaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 420
catcccggga tgagctgacc aagaaccagg tcagcctgac ctgcctggtc aaaggcttct 480
atccaagcga catcgccgtg gagtgggaga gcaatgggca gccggagaac aactacaaga 540
ccacgcctcc cgtgctggac tccgacggct ccttcttcct ctacagcaag ctcaccgtgg 600
acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 660
acaaccacta cacgcagaag agcctctccc tgtctccggg taaatgagtg cgacggccgc 720
gactctagag gat 733

<210> 2
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> Site
<222> (3)
<223> Xaa equals any of the twenty naturally ocurring L-amino acids

<400> 2
Trp Ser Xaa Trp Ser
1 5

<210> 3
<211> 86
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> Synthetic sequence with 4 tandem copies of the GAS binding site found in the IRF1 promoter (Rothman et al., Immunity 1:457-468 (1994)), 18 nucleotides complementary to the SV40 early promoter,

and a Xho I restriction site.

<400> 3
gcgcctcgag atttccccga aatctagatt tccccgaaat gatttccccg aaatgatttc 60
cccgaaatat ctgccatctc aattag 86

<210> 4
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> Synthetic sequence complementary to the SV40 promter; includes a Hind III restriction site.

<400> 4
gcggcaagct ttttgcaaag cctaggc 27

<210> 5
<211> 271
<212> DNA
<213> Artificial Sequence

<220>
<221> Protein_Bind
<223> Synthetic promoter for use in biological assays; includes GAS binding sites found in the IRF1 promoter (Rothman et al., Immunity 1:457-468 (1994)).

<400> 5
ctcgagattt ccccgaaatc tagatttccc cgaaatgatt tccccgaaat gatttccccg 60
aaatatctgc catctcaatt agtcagcaac catagtcccg cccctaactc cgcccatccc 120
gcccctaact ccgcccagtt ccgcccattc tccgccccat ggctgactaa ttttttttat 180
ttatgcagag gccgaggccg cctcggcctc tgagctattc cagaagtagt gaggaggctt 240
ttttggaggc ctaggctttt gcaaaaagct t 271

<210> 6
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> Synthetic primer complementary to human genomic EGR-1 promoter sequence (Sakamoto et al., Oncogene 6:867-871 (1991)); includes a Xho I restriction site.

<400> 6
gcgctcgagg gatgacagcg atagaacccc gg 32

<210> 7
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> Synthetic primer complementary to human genomic EGR-1 promoter sequence (Sakamoto et al., Oncogene 6:867-871 (1991)); includes a Hind III restriction site.

<400> 7
gcgaagcttc gcgactcccc ggatccgcct c 31

<210> 8

<211> 12
<212> DNA
<213> Homo sapiens

<400> 8
ggggactttc cc 12

<210> 9
<211> 73
<212> DNA
<213> Artificial Sequence

<220>
<221> Primer_Bind
<223> Synthetic primer with 4 tandem copies of the NF-KB binding site (GGGGACTTTCCC), 18 nucleotides complementary to the 5' end of the SV40 early promoter sequence, and a XhoI restriction site.

<400> 9
gcggcctcga ggggactttc ccggggactt tccggggact ttccgggact ttccatcctg 60
ccatctcaat tag 73

<210> 10
<211> 256
<212> DNA
<213> Artificial Sequence

<220>
<221> Protein_Bind
<223> Synthetic promoter for use in biological assays; includes NF-KB binding sites.

<400> 10
ctcgagggga ctttcccggg gactttccgg ggactttccg ggactttcca tctgccatct 60
caattagtca gcaaccatag tcccgcccct aactccgccc atcccgcccc taactccgcc 120
cagttccgcc cattctccgc cccatggctg actaatttttt tttatttatg cagaggccga 180
ggccgcctcg gcctctgagc tattccagaa gtagtgagga ggctttttttg gaggcctagg 240
cttttgcaaa aagctt 256

<210> 11
<211> 1388
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1388)..(1388)
<223> n equals a,t,g, or c

<400> 11
cgggtcgacc cacgcgtccg gtccctagga gataagagta tcttgcacag caggtgcagg 60
tttcccagca gctcaggcaa gagtccgatg tttgtgccat ctgatcctga tgtctggaga 120
gatagccatg tgtgagcctg aatttggcaa tgacaaggcc agggagccga gcgtgggtgg 180
caggtggcga gtgtcctggt acgaacggtt tgtgcagcca tgtctggtcg aactgctggg 240
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ggctgccttg gccaaggcgg tgagtcctga ggagaggttc tggaatgcat ctggggcggc 540
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gacgacgctg ctggccctgg ctgtatgcat gggtgccatc aatgagaaga caaagggccc 660
tctggccccg ttctccatcg gctttgccgt caccgtggat atcctggctg ggggccctgt 720
gtctggaggc tgcatgaatc ccgcccgtgc ttttggacct gcggtggtgg ccaaccactg 780
gaacttccac tggatctact ggctgggccc actcctggct ggcctgcttg ttggactgct 840
cattaggtgc ttcattggag atgggaagac ccgcctcatc ctgaaggctc agtgaagcag 900
agctcgtggg attcctgctg ctccaggtgt cctcagctca cctgtcccag actgaggaca 960

ggggagttcc tgcatttcct gccagggcag aggcccagag gagcgacccc ctgcttccac 1020
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cctttgtgct catcagagac cccagcctgg ggaacacgct gcccgcactg cccagagagc 1140
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ccagtgtttc cttccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1380
aaaaaaan 1388

<210> 12
<211> 1478
<212> DNA
<213> Homo sapiens

<400> 12
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actccaacct tttcttggaa agtcataaca tctcactgac tgaacattcc agtgtgccag 180
tggaaaaaaa tatcacttta gaacgacctt ctgctgtaga actcacatgt cagttcacaa 240
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attaccatgt cagtgccaca gaaggcatcc tgtataccca gtacaagttt tccatcatta 360
atagcgaaca actgggaagc tattcttgtt tctttgaaga ggaaaaggaa cgaaggggca 420
catttaattt cggagtccct gaagttcaga gaaaaaacaa accattgatc acttatgtgg 480
gggattccgt tgtcttggtg tgtaaatgcc gacactgtgc tcctttaaat tggacctggt 540
acagtggtaa taggagtgta caggttcctc ttgatgttca catgaatgaa aagtatgcga 600
tcaatggaac aaacgcgaat gaaacaaggc ttaagataat gcagctttca gaagacgata 660
aaggatctta ttggtgccat gcaatgttcc agttgggcga gagccaagaa agtgttgaac 720
tggttgtgat aagttatttg gtgcccctca aaccatttct tggaatagtt gttgaagtta 780
ttcttttagt ggctattatt ctgttttgtg aaatgcacac ccaaaagaaa aagatgcaca 840
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tagaaaataa tgcccccagg cacagaaaaa atgaagctat gagccagtga aagcaaaaca 960
tcgtgtcaag agtaatggga agatgtatag tttctacttc agctttgttt atgtttcctg 1020
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acttttttgc catttgcctt ggttttttct ctaattatgc ttactatgtg tagaaatatt 1380
tgtaataatt ttcatgtaat ggtcaccctc tgtcatattg gataaaaaca tctttattaa 1440
gaaatgaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1478

<210> 13
<211> 1684
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(1)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (18)..(18)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (63)..(63)
<223> n equals a,t,g, or c

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ccncgcgtcc ggcgggaccg gtttgcggga agattctgtg gacaatcacc atgggaagca 120
aaggaggctt catccttctg ctcatcctcg ctgtgctctg ccgttcaggt catagcctga 180
catgctacgc ctgtattgac cgtgaaacct gcaacaagac cactgtttgt tcagttaatc 240

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ttgatgactg cagctacctc tctatctcca aagccctggg gctgaagaag ctccagtaca 360
gctgttgcca gaaggacctg tgcaacggga gtgccagggt ctctgggatg acagcgttga 420
tgctgctccc cttgctggcg gcagccttga cgctttgtct ctaaatcaac accgggaggc 480
cttctcctaa actttccgtg tctccgtata ctccttattt ccttggctgc tgcatgccca 540
cagctttatt tcacctgtcc cgttgggcaa gactaacact agtttgggca acttggtgac 600
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gcttttcaca agagcagcct cgcagggaca gcttgsgtac ctcagatcct ctgcagggcc 780
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gcctttttct tggggctgtt cctgaataat ttgcaagatc cagcagtcgg aaggacactt 1500
gttttctwat catctcggct gtctctaaca gcacagcttg gcttttttgca gatgaaggtg 1560
ggacttcagg attaacattt tttttcactc ccttgctcat gtaatctatg taacaggctg 1620
gaatgactga tgcctttctg aaaataaaat gtaatcaagt gcaaaaaaaa aaaaaaaaaa 1680
aaaa 1684

<210> 14
<211> 1173
<212> DNA
<213> Homo sapiens

<400> 14
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ggagctgtga atgtgatgga gacaagattt agtgtatagc tctgctacct gcctggtgtt 120
cctttgagtt tctttatcct tagatttgac agctgagaaa tctaggtgga ttcatattcg 180
taatcattga ttaacatgca catttgggtt tgcacatttt tgtttatcat acattttct 240
ccgttttcta ttaaagaaca tgctctaggg gaactattaa tagcccacca gtcgggtagg 300
cagcattcaa tccttctatg ccttctttcg ccacctgttg aggtctttct tctgaaacaa 360
agaagaaata gacaaatcag acttgccctc ttggaaatgt ggtccagatt tctctactcc 420
caagctccaa aaaaggcata cattggatgg gctagatcaa ctcctcctga gagccataaa 480
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tgacctgggg caaatgatat aaactctatg agcctctttc cttatcttta aaatgaagag 660
aagtaatacc taccttgtag ggctgttgtg aggattaaat gaagtaatgc atacagtgcc 720
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1173

<210> 15
<211> 1013
<212> DNA
<213> Homo sapiens

<400> 15
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gggctgtgat ctcccagacg ctgcagcgct cactggccaa gtatgcggag ctcgaccgtg 180
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cagaggccag gatgccacgc ctgtcccagg ggaaggggcc tgacatcttc catcggctgg 300
ggcccctgtc tgtgttctca gccaagaacc ggtggcggct ggtggggccc gtccacctga 360
cccgaggaga gggcggcttt ggcctcacgc ttcggggaga ctcgcctgtc ctcatcgctg 420

ccgtcattcc agggagccag gccgcggcgg ctggcctgaa ggagggcgac tacattgtgt 480
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ctgcgggaga ggcgggcgcc agcctgcagg tggtgtcgct gctgcccagc tctagactgc 600
ccagcttggg ggaccgccgg cccgtcctgc tgggccccag ggggcttcta aggagccaga 660
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cctccgggca atgcctgtcc cgcctcatgc tggaggctgc ctcgggcacc tgcctgccca 960
ttaaagactg gtcagacctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1013

<210> 16
<211> 1616
<212> DNA
<213> Homo sapiens

<400> 16
ggcacgaggg aacattctgg taatttgtag agatctgttg gcatctctgc ttcacaaact 60
ggaaaaaatc atttgtaagt cttgctaatt acttttcttg gagaagaaaa aaaatgctac 120
agttgcaaac aaatgtatag ttttcaaaaa gaagcaactt ttttgctccc cagtttattc 180
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gctgtttcct ccagaatctc acagatgact tactaaatcc aacacaaata cacctcagac 780
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taaatctagg tggtgggtat gtgggttata ttgtacatga tttttaactt gtctgcatgt 1560
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<210> 17
<211> 963
<212> DNA
<213> Homo sapiens

<400> 17
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ttgaagaacg ccgcaggcga ttcgtggaag cctgcagagc aagggaagca gcgtttgatg 180
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gaacttgaaa ttgtcggaat atgtgctctc ttcatgtcat attcaataga agtttctagt 780
ttaagattga ttttgtgttt tcttaggcat ttcaagtgac aagcaaagta aatgtatata 840
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aaa 963

<210> 18
<211> 1369
<212> DNA
<213> Homo sapiens

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agaaggttgt ggtgctcccc ttgcttgaag tgcagtgggc agttcttgag ccccccaata 240
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aagatgttac caagtatttc agtgaattcc ccaatgcagg ggaacggatg ttgaactcca 360
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ttttcggcag atggactttg agtttgctgc atggcagatg ctctacctat ttacttcccc 480
acagagagtt tacagaaatt ttcattatcg aaagcagaca aaggatcaat gggccagaga 540
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ctttgtcctg gacatgggat tttttgagac gataaagctg ctccctttggg ttgtcttcat 660
agattgtgta ggcgttggtc ttctcatatc aactttaatg tggtttatct cgaacaagta 720
cttagtgaag cggcaaagca gggactatga tgtggagtgg ggttatgcct tcgacgtgca 780
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<211> 1298
<212> DNA
<213> Homo sapiens

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<210> 20
<211> 1967
<212> DNA
<213> Homo sapiens

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<210> 21
<211> 850
<212> DNA
<213> Homo sapiens

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<210> 22
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<212> DNA
<213> Homo sapiens

<400> 22
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<210> 23
<211> 1167
<212> DNA
<213> Homo sapiens

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<210> 24
<211> 929
<212> DNA
<213> Homo sapiens

<400> 24
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<211> 397
<212> DNA
<213> Homo sapiens

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<210> 26
<211> 949
<212> DNA
<213> Homo sapiens

<400> 26
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<211> 1053
<212> DNA
<213> Homo sapiens

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<210> 28
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<212> DNA
<213> Homo sapiens

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tcacaaaaaa aaaaaaaaaa aaaaaaaaa 689

<210> 29
<211> 1358
<212> DNA
<213> Homo sapiens

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<210> 30
<211> 767
<212> DNA
<213> Homo sapiens

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<212> DNA
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<220>
<221> misc_feature
<222> (25)..(25)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (35)..(35)
<223> n equals a,t,g, or c

<400> 31
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<210> 32
<211> 1564
<212> DNA
<213> Homo sapiens

<400> 32
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<210> 33
<211> 762
<212> DNA
<213> Homo sapiens

<400> 33
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<210> 34
<211> 862
<212> DNA
<213> Homo sapiens

<400> 34
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ggggaaaaaa aaaaaaaaaa aa 862

<210> 35
<211> 1499
<212> DNA
<213> Homo sapiens

<400> 35
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<210> 36
<211> 2791
<212> DNA
<213> Homo sapiens

<400> 36
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gcatagacaa gcttaacatt gtagatgttt ctcttcaaaa atcatcttaa acatttgcat 180
ttggaattgt gttaaataga atgtgtgaaa cactgtatta gtaaacttca tcacctttct 240
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<210> 37
<211> 1013
<212> DNA
<213> Homo sapiens

<400> 37
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<210> 38
<211> 718
<212> DNA
<213> Homo sapiens

<400> 38
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tttgccatca tcctggtgac tggggctgtt gccttggctg cttactccta ctttcggata 120
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<210> 39
<211> 374
<212> DNA
<213> Homo sapiens

<400> 39
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<210> 40
<211> 1410
<212> DNA
<213> Homo sapiens

<400> 40
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<210> 41
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 41
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gccagtggaa aaaaatatca ctttagaacg accttctgct gtagaactca catgtcagtt 240
cacaacttct ggggatgtga attcagtaaa tgtgacttgg aaaaaagggg atgaacaact 300
taagaattac catgtcagtg ccacagaagg catcctgtat acccagtaca agttttccat 360
cattaatagc gaacaactgg gaagctattc ttgtttcttt gaagaggaaa aggaacgaag 420
gggcacattt aatttcggag tccctgaagt tcagagaaaa aacaaaccat tgatcactta 480
tgtgggggat tccgttgtct tggtgtgtaa atgccgacac tgtgctcctt taaattggac 540
ctggtacagt ggtaatagga gtgtacaggt tcctcttgat gttcacatga atgaaaagta 600
tgcgatcaat ggaacaaacg cgaatgaaac aaggcttaag ataatgcagc tttcagaaga 660
cgataaagga tcttattggt gccatgcaat gttccagttg ggcgagagcc aagaaagtgt 720
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gattatttta cattaaagca aggtaaatca tattaaatat gttctatgag ctataaccca 1200
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agaaaacttt tttgccattt gccttgkttt tttttctaat tatgcttact atgtgtagaa 1380
atatttgtaa taattttcat gtaatgktca ccctctgtca tattggataa aaacatcttt 1440
attaagaaat gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaagggcggc cgc 1493

<210> 42
<211> 1557
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(1)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (9)..(9)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (1347)..(1347)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (1527)..(1527)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (1533)..(1533)
<223> n equals a,t,g, or c

<400> 42
natgcccant cctataggga agctggtacg cctgcaggta ccggtccgga attcccgggt 60
cgacccacgc gtccgaaaat catcaactaa gaaggggcca tcagtataga gaacgttagc 120
ctgtggagct gtgaatgtga tggagacaag atttagtgta tagctctgct acctgcctgg 180
tgttcctttg agtttcttta tccttagatt tgacagctga gaaatctagg tggattcata 240
ttcgtaatca ttgattaaca tgcacatttg ggtttgcaca tttttgttta tcatacattt 300
ttctccgttt tctattaaag aacatgctct aggggaacta ttaatagccc accagtcggg 360
taggcagcat tcaatccttc tatgccttct ttcgccacct gttgaggtct ttcttctgaa 420
acaaagaaga aatagacaaa tcagacttgc cctcttggaa atgtggtcca gatttctcta 480
ctcccaagct ccaaaaaagg catacattgg atgggctaga tcaactcctc ctgagagcca 540
taaatccgcc aagagttgtt ttccatgtaa gggtgtggta caatggggaa cgcctgatgt 600
tggaggaaag caggaggact ttagagtgga gttgcattct aatctctctg ccgcttcaac 660
tatgtgacct ggggcaaatg atataaactc tatgagcctc tttccttatc tttaaaatga 720

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tgcctaacaa agtatttaac atcatatttt ttaaaagctc atgaaatatt agtttttctt      840
ccttcccctc tttctatttt ctctcctgtt ccctttctc tccctcctct gccctctcct       900
tccttcagat gttagtctaa aacagcacct tggatctaag cagcaccttt gagaaagaaa      960
agactgcttc aagaatgtct agttgcacct cctttccgta tgtggcctaa atgcctaggt     1020
tggatcaata gtttaatttt tttattgaac tgtttaatat tgactatgga cttacattca     1080
cttttactgt tttctgtata tttacttttg cttgaagtgt tttaatattg actatttacc     1140
tctgctcatt tttattgatt ttctgtattt tttcaatgaa aattataata aaaattattt     1200
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aagcttacgt acgcgtgcat gcgacgtcat agctcttcta tagtgtcacc taaattcaat     1320
tcactggccg tcgttttaca acgtcgngac tgggaaaacc ctggcgttac ccaacttaat     1380
cgccttgcag cacatccccc tttcgccagc tggcgtaata gcgaagaggc ccgcaccgat     1440
cgcccttccc aacagttgcg cagcctgaat ggcgaatggg acgcgccctg tagcggcgca     1500
ttaagcgcgg cgggtgtggt ggttacncgc agngtgaccg ctacacttgc cagcgcc        1557
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<210> 43
<211> 1013
<212> DNA
<213> Homo sapiens

<400> 43

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ggtgacatcc cagtgccccg cgtgcaggca aggcacacct gaagcgtgcc atcctggggc       60
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gggctgtgat ctcccagacg ctgcagcgct cactggccaa gtatgcggag ctcgaccgtg      180
aggatgactt ctgtgaggct gccgaggccc cggacatcca gcctaagacc caccagaagc      240
cagaggccag gatgccacgc ctgtcccagg ggaaggggcc tgacatcttc catcggctgg      300
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cccgaggaga gggcggcttt ggcctcacgc ttcggggaga ctcgcctgtc ctcatcgctg      420
ccgtcattcc agggagccag gccgcggcgg ctggcctgaa ggagggcgac tacattgtgt      480
cagtgaatgg gcagccatgc aggtggtgga gacacgcgga ggtggtgacg gagctgaagg      540
ctgcgggaga ggcgggcgcc agcctgcagg tggtgtcgct gctgcccagc tctagactgc      600
ccagcttggg ggaccgccgg cccgtcctgc tgggccccag gggggcttcta aggagccaga     660
gggagcatgg ttgcaagacc ccggcatcca cgtgggccag tccccgggcc ctcctcaact      720
ggagccgaaa ggcccagcag ggcaagactg gaggctgccc cagccctgtg ccccagtgaa      780
gccagctccg gcctcatcct tgaagcaccc agggtggccg tgagggccag gatccctgca      840
cgcctcagcc ctggctccag ctggcagcaa gcaccgagca tgccctcccc acccagagga      900
cctccgggca atgcctgtcc cgcctcatgc tggaggctgc ctcgggcacc tgcctgccca      960
ttaaagactg gtcagacctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa            1013
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<210> 44
<211> 986
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (131)..(131)
<223> n equals a,t,g, or c

<400> 44

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caggcgcggc gaatggtgac agagacgtcc cgcaggcgga gaatacaaga gcttgaagaa      120
cgccgcagga ntttcgtgga agcctgcaga gcaagggaag cagcgtttga tgccgaatat      180
cagcgaaatc ctcacagggt ggacctcgat attttaacct ttacgatagc tctgactgcc      240
tctgaagtta tcaaccctct gatagaagaa cttggttgcg ataagtttat caatagagaa      300
tagttaggtg gtgacactac ttcaagagaa cctctgcatt ccagtcatac caatcctgca      360
acttgatttt cagaagtcaa gagtatatcg cgataagaca gtgcacaggt ggaggggaaa      420
aaaagggga gggggaagct tatcttgaaa aagcatcaca gaagtagaaa aaaatgtcga       480
aagcattata actgtaacgt tctttgagtt tgtgattgat ccacattttt ccccctgcat      540
tatggaaaat gtctctcagc attgctttat tacaaagtaa aggatggttt tataaaattg      600
agactgatga aacatcaata ctagagccca tgaggatgaa agaaattatc aaatagtgct      660
gaacagaata agatgttaac gctgagttat taggactgga aggctatgaa aagaacttga      720
aattgtcgga atatgtgctc tcttcatgtc atattcaata gaagtttcta gtttaagatt      780
gattttgtgt tttcttaggc atttcaagtg acaagcaaag taaatgtata tattatgtga      840
taaatcatgt tttcaagaac gtcaaatttc tggacttttt tctttcaatt tttaattttt      900
aaagtttttt tggtattaaa aaatctattc acaagccaaa aaatatataa aatatacagc      960
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gaaaagccaa aaaaaaaaaa aaaaac 986

<210> 45
<211> 810
<212> DNA
<213> Homo sapiens

<400> 45
ggcacgagat tcaaggctac tatcgccagt atcgtcagga gcctgtcagg tttgggaaca 60
tcggcttcgg aacccctac tactatgtgg gctggtacga gtgtggggtc tccatccctg 120
gaaagtggta atcacaggac cgtcatgctg caagcttgcc ctgcccagcc ccaccaacta 180
agtcgcacta ggggctgtga gcaaagacag ccagcgtgct cagccccgct gccctaggtg 240
ccaggaaggt catagatgga cactggccat tctggtcatc tcagtctgga actcagtccc 300
acttcttggc ctggacaatg aacaggattc agttttgctg ttaactttgc ttctctactt 360
tttttgtttt gtttgtaata gcacatccca gagacatcag aaaccagcaa ctgattcagt 420
gtgatttcca gacttttag gcatgaaatt cggacacttc agtatttcca ggaatagcat 480
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tctccaaaac taactgaatt taagcttcag gtccctttgt atgcagtaga aaggaattat 600
taaaaacacc accaaagaaa ataaatatat cctacttgaa atttactcta tggacttacc 660
cactgctaga ataaatgtat caaatcttat ttgtaaattc tcaattttga tatatatatg 720
tatatatgca tatacatatc cacacttgtc tgcaagaata ttgattaaaa ttgctaaatt 780
tgtacttgtt caaaaaaaaa aaaaaaaaaa 810

<210> 46
<211> 880
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (864)..(865)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (868)..(868)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (878)..(878)
<223> n equals a,t,g, or c

<400> 46
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tggcagcata ggttctcccc cagggtggtg ctgaacttca gctcagaagc agcctggacc 120
ccatcttacc tccagataag gtgttttagg tactctgttg ccagtgttag tgcaacttag 180
tttaaaaata gaggacttgt tcacagtatg ctctaagtct cacactggag ttttgtgcaa 240
cataaagtag gtgattttgg agcagagcga agtctagaaa tttgccttaa attatttgtg 300
gtactctaga gaacgtggta tgtgtatgtg tgtatgtgtg tttgaatata ggaactagtt 360
cattgaacgt tagattgttc taagaccaga attagattaa aaatgcataa catattaagt 420
attaaaaagt gtttatattg tatatgaatt ttttgcggta agtttagctt ggcattttag 480
gttttaattg atgcttaatc tgttaaaatg atgtactgta ttttaaagta ttctaattgt 540
gctttttgt accatcttca gtatgaaaaa tgtcagtatt tagttccttt ctcaggcaca 600
attagatttt tattgacatt gttttccccc ttaactcatg taattagtca tagcaaccaa 660
gagtcaagag agtgattacc agccaattaa gaaaaatgtg accaagcaga ttgcagagta 720
caataaaacc atcgtggatg ctttacatag catcagcgga aactgagttt aagtccactg 780
aaagtctcta aggaagtatc ctcttgctgc taaacttggt acaagttgac taccaaaaaa 840
aaaaaaaaaa agccgaggkg ggcnngtncc aagggccntg 880

<210> 47
<211> 1668
<212> DNA
<213> Homo sapiens

<400> 47

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ttgattgtsa cagcaagatc aaataacaaa acgaagcata ttgaagaaga gaacttgatt 180
gacgaagact ttcaaaatct aaaactgcgg tcgacaggct tcaccaatct tggagcagaa 240
gggagcgtct ttcctaaggt caggataacg gcctccagag acagccagat gcaaaatccc 300
tattcaagcc acagcagcat gccccgccct gactattaga atcataagaa tgtggaaccc 360
gccatggccc ccaaccaatg tacaagctat tatttagagt gtttagaaag actgatggag 420
aagtgagcac cagtaaagat ctggcctccg ggtttttct tccatctgac atctgccagc 480
ctctctgaat ggaagttgtg aatgtttgca acgaatccag ctcacttgct aaataagaat 540
ctatgacatt aaatgtagta gatgctatta gcgcttgtca gagaggtggt tttcttcaat 600
cagtacaaag tactgagaca atggttaggg ttgttttctt aattcttttc ctggtagggc 660
aacaagaacc atttccaatc tagaggaaag ctccccagca ttgcttgctc ctgggcaaac 720
attgctcttg agttaagtga cctaattccc ctgggagaca tacgcatcaa ctgtggaggt 780
ccgaggggat gagaagggat acccaccacc tttcaagggt cacaagctca ctctctgaca 840
agtcagaata gggacactgc ttctatccct ccaatggaga gattctggca acctttgaac 900
agcccagagc ttgcaaccta gcctcaccca agaagactgg aaagagacat atctctcagc 960
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ctaaaaatgt ccactatggg gtgcactcta cagtttttga aatgctagga ggcagaaggg 1080
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agcaaaggag cacttctcta atcatgccct cccgaagact ggctgggaga aggtttaaaa 1260
acaaaaaatc caggagtaag agccttaggt cagtttgaaa ttggagacaa actgtctggc 1320
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aagcttttac aaatgttatt agtgtccttt tttatttcta atgccttgtc ctcttaaaag 1560
ttattttatt tgttattatt atttgttctt gactgttaat tgtgaatggt aatgcaataa 1620
agtgcctttg ttagatggaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1668

<210> 48
<211> 851
<212> DNA
<213> Homo sapiens

<400> 48
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atgctgaatt ttctttgggg gcattcatta attgtcccag ctgcagcgac tggagcaagt 120
ctggaagctg cctgtgctaa gaccacccag ctgtccctgg gttctcatcc tagggccttc 180
tttgcttcca ggtcagggga cctgcttcaa tgagaaagca actgaattga ggctaggaga 240
ggtagggaga gctgagttct gacttcacct gtgcagaact ctctgccccc atgttacctg 300
gactggaaca gactgtgaat atagcagaag gttccaagaa ctctggtgtc tgacctagaa 360
gaggcacagt tctctctact ggaaagaaaa cgatgtagcc gattgcacaa gggtgccaag 420
ggaagaccca ggatggccca tcaaaggaac ctgggggagg atgcaggagg ctgaagggat 480
gcacctggca tttctctcac tgtgctctta ccgcatcagc aacccccaac ttttgggcct 540
actctgcccc ccatgcgtga ataccctgct tggatgctgt gcttttccgg tttgtctcta 600
agccccttc tccagggcat gttggtttcc ctggcctctc agtgtcctaa ctggagccca 660
gagtgccttg ttctgagcca ggagacggct gagcactggc cctccacacc taagcgtcct 720
ttacattaac ttattggtct tgtataacac ctggtgccat tgccaagtgg ctgtgtcctc 780
agctacagag ctggaattgt gtggggttta gtgctaaata cttcaataaa gtctgttttt 840
tgtgattggc t 851

<210> 49
<211> 511
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(1)
<223> n equals a,t,g, or c

<400> 49
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tccattataa tcaatattgt agcattcatt cattcattat tcattcactt accatttatt 120
gaagccttaa atttgtgctc agtcagtgca ctgtgaatgg gtataaagag acaactaaga 180
atctgatcat tgtctggtgg gagagactga cgttacaaag tgcaatggta catgcattct 240

gtgagacaga aattcatgga ggagaactgg aagagattca cctggatagg tagcctgggg 300
cataaagagt aggcctagga agccctaagg acattaggat ttattttgag agatgatggt 360
tgctttgtta gggtgacagc agggtggtga tgaagagagg tcttaatcta aatatatttt 420
aaaggtggag ctaacaaatt ttgtggcatg aaatcaaaga gaacatttta gataggcttt 480
aaagattttg gagccaagca caatgactca t 511

<210> 50
<211> 817
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (778)..(778)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (791)..(791)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (801)..(801)
<223> n equals a,t,g, or c

<400> 50
ggcacgaggt taattttgaa acttatgctt aagatttaac cagggcagag gcatatttca 60
gcataaataa tgttgccatt ataaactctt atccttccta tctcaacagg aaatgagcaa 120
ttattgcttc atgcttcaat gcactgtttt aaaatactgt ttaatttgtt aaaggtgtga 180
actgtttaat ttatctcaca cgtttttta aacaaatact gattggacat gcgctgcacg 240
ccaggctttg ggcttggtac ctcagggttc tcacagggga ggctggaagt ggaaacaagc 300
acatgtgtaa ctgttgtgta gacagtctaa ttggtagaaa atcagcgaac aaagaagcag 360
acaaattaga aaatgaacgt aaggtgatgt gctaaaaaga gggtagccat tatgtcagtg 420
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aagaagttgc ccgctgactt gagagagagg tgttgcgttt caggtgctga atgtccttat 600
aaaaagttga atatttcgag catctctatc aatacatttg aatgctgaga gcttttcctt 660
ccagaagctc atgtcatttt caacacacac ttctatttac ctttatgtag tttctaaaaa 720
ttgaaaacca gaattggagg ttttttaaa aaaaaaaaa aaaaagccg aggkgggnaa 780
agtamaaatg ngcctkwgcc ntttcctttc cccgtcc 817

<210> 51
<211> 762
<212> DNA
<213> Homo sapiens

<400> 51
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acatgtaaaa ggcaggacgc acataaaggt gtacatggct attgtttcac ctggagaaac 120
cacatgattg ggacctgaag gtttactgac tgactacagg ggctgattgt gaagcacgag 180
gaaccccatg tgtgtggaga ctgtagggtg agagcacaca attattagca tcatttctga 240
gtgatctcac agatttttgt tcttgtgttt gttttgcttt ttgacaactg cttctcccac 300
gttccttgca attctattct ctcaccttca ctttactatt tgtattcgat ggaccaggat 360
aattcaggca aggttacctt gtaaacttga attggccaca caccatgttg tcacccagct 420
ggctatgaag tgaataatgg tactgaaagt aaacctgaag acctttctca gatctatttt 480
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agcatttatg acagctccaa gaaaaatcat ctactctatg caggagatat gtttagagac 600
ctctcagaaa aacttgcctg gtttgagggt acacagtacc attttaatct tctgaaaata 660
tctgtattcc tgctcttttt ctgctgtcac tgtcaatctg ctatattttt cactatccta 720
ttaaaatatt actgtctcct ttaaaaaaaa aaaaaaaaaa aa 762

<210> 52
<211> 1417
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1378)..(1378)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (1392)..(1392)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (1399)..(1399)
<223> n equals a,t,g, or c

<220>
<221> misc_feature
<222> (1404)..(1404)
<223> n equals a,t,g, or c

<400> 52
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taaggaaaga argataatta tctttaaagg ttgattccca ccctccctcc ccagttactt 120
aaggaactaa gtgagtacat ctccagttgc ccatgaaagc ataagtttgt tttcctcagc 180
tgaggcaagt ggtagagtat acaggataac gaagtaacat gtaaaaggca ggacgcacat 240
aaaggtgtac atggctattg tttcacctgg agaaaccaca tgattgggac ctgaaggttt 300
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gtgtttgttt tgctttttga caactgcttc tcccacgttc cttgcaattc tattctctca 480
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acttgaattg gccacacacc atgttgtcac ccagctggct atgaagtgaa taatggtact 600
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aaaatattcg acatgaatta atgtagagaa ctataaagca tttatgacag ctccaagaaa 720
aatcatctac tctatgcagg agatatgttt agagacctct cagaaaaact tgcctggttt 780
gagggtacac agtaccattt taatcttctg aaaatatctg tattcctgct ctttttctgc 840
tgtcactgtc aatctgctat atttttcact atcctattaa aatattactg tctcctttat 900
ctgttcaatg tccatatttt aaaaaaatct tccttgtatg agctattctg atccaaataa 960
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ttctccatac attgtaaaac tgtaatcctt aggtatttct aaaacataaa gaggagaatt 1080
aagtcagctg cagaacaatg gggctgawtc ytctgctttt tctctggaaa atctttcatt 1140
gcttttggtg gaaatttacc tagaggttac aaccacagga tgtagcttgg tctcttattt 1200
gccttttttgg gaaaccaatt aagattaata caggataaag gaaaaaagca atctattcat 1260
tatataacac agttgtttgt attacttgtt ccctgcaaag gcaaatctgt tgaatgcttg 1320
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ggaaaaaagg tncattttnt tggnttgcat tcttaac 1417

<210> 53
<211> 2793
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (2793)..(2793)
<223> n equals a,t,g, or c

<400> 53
ccacgcgtcc ggattacatg tagttattga gaatcctttc gaattcagtg gcttaatcat 60
gaatgtctaa atattgttga cattaggatg atacatgtaa attaaagtta catttgttta 120
gcatagacaa gcttaacatt gtagatgttt ctcttcaaaa atcatcttaa acatttgcat 180
ttggaattgt gttaaataga atgtgtgaaa cactgtatta gtaaacttca tcacctttct 240
acttccttat agtttgaact tttcagtttt tgtagttccc aaacagttgc tcaatttaga 300
gcaaattaat ttaacacctg ccaaaaaaag gctgctgttg gcttatcagt tgtctttaaa 360
ttcaaatgct catgtgactt ttatcacatc aaaaaatatt tcattaatga ttcaccttta 420
gctctgaaaa ttaccgcgtt tagtaattat agtgggctta taaaaacatg caactctttt 480

tgatagttat ttgagaattt tggtgaaaaa tatttagctg agggcagtat agaacttata 540
aaccaatata ttgatatttt taaaacattt ttacatataa gtaaactgcc atctttgagc 600
ataactacat ttaaaaataa agctgcatat ttttaaatca agtgtttaac aagaatttat 660
atttttttatt ttttaaaatt aaaaataatt tatatttcct ctgttgcatg aggattctca 720
tctgtgctta taatggttag agattttatt tgtgtggaat gaagtgaggc ttgtagtcat 780
ggttctagtg tttcagtttg ccaagtctgt ttactgcagt gaaattcatc aaatgtttca 840
gtgtggtttt ctgtagccta tcatttactg gctatttttt tatgtacacc tttaggattt 900
tctgcctact ctatccagtt gtccaaatga tatcctacat tttacaaatg ccctttcagt 960
ttctattttc tttttccatt aaattgccct catgtcctaa tgtgcagttt gtaagtgtgt 1020
gtgtgtgtgt ctgtgtgtgt gtgaatttga ttttcaagag tgctagactt ccaatttgag 1080
agattaaata atttaattca ggcaaacatt tttcattgga atttcacagt tcattgtaat 1140
gaaaatgtta atcctggatg acctttgaca tacagtaatg aatcttggat attaatgaat 1200
ttgttagtag catcttgatg tgtgttttaa tgagttattt tcaaagttgt gcattaaacc 1260
aaagttggca tactggaagt gtttatatca agttccattt ggctactgat ggacaaaaaa 1320
tagaaatgcc ttcctatgga gagtattttt cctttaaaaa attaaaaagg ttaattattt 1380
tgaaaaaaaa aaatcgaccc acgcgtccgg attacatgta gttattgaga atcctttcga 1440
attcagtggc ttaatcatga atgtctaaat attgttgaca ttaggatgat acatgtaaat 1500
taaagttaca tttgtttagc atagacaagc ttaacattgt agatgtttct cttcaaaaat 1560
catcttaaac atttgcattt ggaattgtgt taaatagaat gtgtgaaaca ctgtattagt 1620
aaacttcatc acctttctac ttccttatag tttgaacttt tcagtttttg tagttcccaa 1680
acagttgctc aatttagagc aaattaattt aacacctgcc aaaaaaaggc tgctgttggc 1740
ttatcagttg tctttaaatt caaatgctca tgtgactttt atcacatcaa aaaatatttc 1800
attaatgatt cacctttagc tctgaaaatt accgcgttta gtaattatag tgggcttata 1860
aaaacatgca actctttttg atagttattt gagaatttttg gtgaaaaata tttagctgag 1920
ggcagtatag aacttataaa ccaatatatt gatattttta aaacattttt acatataagt 1980
aaactgccat ctttgagcat aactacattt aaaaataaag ctgcatattt ttaaatcaag 2040
tgtttaacaa gaatttatat tttttatttt ttaaaattaa aaataattta tatttcctct 2100
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tgtacacctt taggattttc tgcctactct atccagttgt ccaaatgata tcctacattt 2340
tacaaatgcc ctttcagttt ctattttctt tttccattaa attgccctca tgtcctaatg 2400
tgcagtttgt aagtgtgtgt gtgtgtgtct gtgtgtgtgt gaatttgatt ttcaagagtg 2460
ctagacttcc aatttgagag attaaataat ttaattcagg caaacatttt tcattggaat 2520
ttcacagttc attgtaatga aaatgttaat cctggatgac ctttgacata cagtaatgaa 2580
tcttggatat taatgaattt gttagtagca tcttgatgtg tgttttaatg agttattttc 2640
aaagttgtgc attaaaccaa agttggcata ctggaagtgt ttatatcaag ttccatttgg 2700
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<210> 54
<211> 393
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (214)..(214)
<223> n equals a,t,g, or c

<400> 54
aattcggcac gagagcttat tcattgaagg agtaagtggc tgctcactcc tttctgctga 60
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gaatctcccc acccacccac actgcagcag gctgcggctg gccgacttgt taattgccga 180
gcaggaacac agcagcaagc tgcgggcacc cctnacttgc tacagttgat ggctgtgtgt 240
ctctcccagg acctagagaa aacccgsctt gtgtacgagc gcatcactat cggcacattg 300
ttcatgtcct tcatgaacgr gtaaactgct gtttccgtgg rttttcaaaa aaaaaaaaaa 360
aaaaaaaaaa aaaaaaaaag ctcgagggtg ggc 393

<210> 55
<211> 261
<212> PRT
<213> Homo sapiens

<400> 55
Met Ser Gly Glu Ile Ala Met Cys Glu Pro Glu Phe Gly Asn Asp Lys

```
  1               5                  10                  15

Ala Arg Glu Pro Ser Val Gly Gly Arg Trp Arg Val Ser Trp Tyr Glu
            20                  25                  30

Arg Phe Val Gln Pro Cys Leu Val Glu Leu Leu Gly Ser Ala Leu Phe
        35                  40                  45

Ile Phe Ile Gly Cys Leu Ser Val Ile Glu Asn Gly Thr Asp Thr Gly
    50                  55                  60

Leu Leu Gln Pro Ala Leu Ala His Gly Leu Ala Leu Gly Leu Val Ile
65                  70                  75                  80

Ala Thr Leu Gly Asn Ile Ser Gly Gly His Phe Asn Pro Ala Val Ser
                85                  90                  95

Leu Ala Ala Met Leu Ile Gly Gly Leu Asn Leu Val Met Leu Leu Pro
            100                 105                 110

Tyr Trp Val Ser Gln Leu Leu Gly Gly Met Leu Gly Ala Ala Leu Ala
        115                 120                 125

Lys Ala Val Ser Pro Glu Glu Arg Phe Trp Asn Ala Ser Gly Ala Ala
    130                 135                 140

Phe Val Thr Val Gln Glu Gln Gly Gln Val Ala Gly Ala Leu Val Ala
145                 150                 155                 160

Glu Ile Ile Leu Thr Thr Leu Leu Ala Leu Ala Val Cys Met Gly Ala
                165                 170                 175

Ile Asn Glu Lys Thr Lys Gly Pro Leu Ala Pro Phe Ser Ile Gly Phe
            180                 185                 190

Ala Val Thr Val Asp Ile Leu Ala Gly Gly Pro Val Ser Gly Gly Cys
        195                 200                 205

Met Asn Pro Ala Arg Ala Phe Gly Pro Ala Val Val Ala Asn His Trp
    210                 215                 220

Asn Phe His Trp Ile Tyr Trp Leu Gly Pro Leu Leu Ala Gly Leu Leu
225                 230                 235                 240

Val Gly Leu Leu Ile Arg Cys Phe Ile Gly Asp Gly Lys Thr Arg Leu
                245                 250                 255

Ile Leu Lys Ala Gln
            260
```

<210> 56
<211> 310
<212> PRT
<213> Homo sapiens

```
<400> 56
Met Met Thr Lys Tyr Ser Asn Leu Ser Leu Glu Ser His Asn Phe Ser
  1               5                  10                  15

Leu Thr Ala Ser Pro Leu Thr Ser Leu Pro Ile Pro Glu Val Met Met
            20                  25                  30

Thr Lys Tyr Ser Asn Leu Phe Leu Glu Ser His Asn Ile Ser Leu Thr
        35                  40                  45
```

```
Glu His Ser Ser Val Pro Val Glu Lys Asn Ile Thr Leu Glu Arg Pro
     50                  55                  60

Ser Ala Val Glu Leu Thr Cys Gln Phe Thr Thr Ser Gly Asp Val Asn
 65                  70                  75                  80

Ser Val Asn Val Thr Trp Lys Lys Gly Asp Glu Gln Leu Lys Asn Tyr
                 85                  90                  95

His Val Ser Ala Thr Glu Gly Ile Leu Tyr Thr Gln Tyr Lys Phe Ser
            100                 105                 110

Ile Ile Asn Ser Glu Gln Leu Gly Ser Tyr Ser Cys Phe Phe Glu Glu
        115                 120                 125

Glu Lys Glu Arg Arg Gly Thr Phe Asn Phe Gly Val Pro Glu Val Gln
    130                 135                 140

Arg Lys Asn Lys Pro Leu Ile Thr Tyr Val Gly Asp Ser Val Val Leu
145                 150                 155                 160

Val Cys Lys Cys Arg His Cys Ala Pro Leu Asn Trp Thr Trp Tyr Ser
                165                 170                 175

Gly Asn Arg Ser Val Gln Val Pro Leu Asp Val His Met Asn Glu Lys
            180                 185                 190

Tyr Ala Ile Asn Gly Thr Asn Ala Asn Glu Thr Arg Leu Lys Ile Met
        195                 200                 205

Gln Leu Ser Glu Asp Asp Lys Gly Ser Tyr Trp Cys His Ala Met Phe
    210                 215                 220

Gln Leu Gly Glu Ser Gln Glu Ser Val Glu Leu Val Val Ile Ser Tyr
225                 230                 235                 240

Leu Val Pro Leu Lys Pro Phe Leu Gly Ile Val Val Glu Val Ile Leu
                245                 250                 255

Leu Val Ala Ile Ile Leu Phe Cys Glu Met His Thr Gln Lys Lys Lys
            260                 265                 270

Met His Met Asp Asp Gly Lys Glu Phe Glu Gln Val Glu Gln Leu Lys
        275                 280                 285

Ser Asp Asp Ser Asn Gly Ile Glu Asn Asn Ala Pro Arg His Arg Lys
    290                 295                 300

Asn Glu Ala Met Ser Gln
305                 310
```

<210> 57
<211> 117
<212> PRT
<213> Homo sapiens

```
<400> 57
Met Gly Ser Lys Gly Gly Phe Ile Leu Leu Leu Ile Leu Ala Val Leu
  1               5                  10                  15

Cys Arg Ser Gly His Ser Leu Thr Cys Tyr Ala Cys Ile Asp Arg Glu
            20                  25                  30
```

```
Thr Cys Asn Lys Thr Thr Val Cys Ser Val Asn His Asp Ala Cys Leu
          35                  40                  45

Leu Val Lys Ala Asp Pro Lys Leu Phe Tyr Arg Gln Cys Trp Lys Phe
      50                  55                  60

Asp Asp Cys Ser Tyr Leu Ser Ile Ser Lys Ala Leu Gly Leu Lys Lys
 65                  70                  75                  80

Leu Gln Tyr Ser Cys Cys Gln Lys Asp Leu Cys Asn Gly Ser Ala Arg
                 85                  90                  95

Val Ser Gly Met Thr Ala Leu Met Leu Leu Pro Leu Leu Ala Ala Ala
            100                 105                 110

Leu Thr Leu Cys Leu
        115
```

<210> 58
<211> 135
<212> PRT
<213> Homo sapiens

<400> 58

```
Met His Ile Trp Val Cys Thr Phe Leu Phe Ile Ile His Phe Ser Pro
  1               5                  10                  15

Phe Ser Ile Lys Glu His Ala Leu Gly Glu Leu Leu Ile Ala His Gln
            20                  25                  30

Ser Gly Arg Gln His Ser Ile Leu Leu Cys Leu Leu Ser Pro Pro Val
        35                  40                  45

Glu Val Phe Leu Leu Lys Gln Arg Arg Asn Arg Gln Ile Arg Leu Ala
    50                  55                  60

Leu Leu Glu Met Trp Ser Arg Phe Leu Tyr Ser Gln Ala Pro Lys Lys
65                  70                  75                  80

Ala Tyr Ile Gly Trp Ala Arg Ser Thr Pro Pro Glu Ser His Lys Ser
                85                  90                  95

Ala Lys Ser Cys Phe Pro Cys Lys Gly Val Val Gln Trp Gly Thr Pro
            100                 105                 110

Asp Val Gly Gly Lys Gln Glu Asp Phe Arg Val Glu Leu His Ser Asn
        115                 120                 125

Leu Ser Ala Ala Ser Thr Met
    130                 135
```

<210> 59
<211> 257
<212> PRT
<213> Homo sapiens

<400> 59

```
His Pro Ser Ala Pro Arg Ala Gly Lys Ala His Leu Lys Arg Ala Ile
  1               5                  10                  15

Leu Gly Gln Glu Glu Ala Leu Arg Leu His Ala Leu Cys Arg Val Leu
            20                  25                  30
```

```
Arg Glu Val Asp Leu Leu Arg Ala Val Ile Ser Gln Thr Leu Gln Arg
          35                  40                  45

Ser Leu Ala Lys Tyr Ala Glu Leu Asp Arg Glu Asp Asp Phe Cys Glu
      50                  55                  60

Ala Ala Glu Ala Pro Asp Ile Gln Pro Lys Thr His Gln Lys Pro Glu
 65                  70                  75                  80

Ala Arg Met Pro Arg Leu Ser Gln Gly Lys Gly Pro Asp Ile Phe His
                 85                  90                  95

Arg Leu Gly Pro Leu Ser Val Phe Ser Ala Lys Asn Arg Trp Arg Leu
            100                 105                 110

Val Gly Pro Val His Leu Thr Arg Gly Glu Gly Gly Phe Gly Leu Thr
        115                 120                 125

Leu Arg Gly Asp Ser Pro Val Leu Ile Ala Ala Val Ile Pro Gly Ser
    130                 135                 140

Gln Ala Ala Ala Ala Ala Gly Leu Lys Glu Gly Asp Tyr Ile Val Ser Val
145                 150                 155                 160

Asn Gly Gln Pro Cys Arg Trp Trp Arg His Ala Glu Val Val Thr Glu
                165                 170                 175

Leu Lys Ala Ala Gly Glu Ala Gly Ala Ser Leu Gln Val Val Ser Leu
            180                 185                 190

Leu Pro Ser Ser Arg Leu Pro Ser Leu Gly Asp Arg Arg Pro Val Leu
        195                 200                 205

Leu Gly Pro Arg Gly Leu Leu Arg Ser Gln Arg Glu His Gly Cys Lys
    210                 215                 220

Thr Pro Ala Ser Thr Trp Ala Ser Pro Arg Ala Leu Leu Asn Trp Ser
225                 230                 235                 240

Arg Lys Ala Gln Gln Gly Lys Thr Gly Gly Cys Pro Ser Pro Val Pro
                245                 250                 255

Gln
```

<210> 60
<211> 72
<212> PRT
<213> Homo sapiens

```
<400> 60
Met Tyr Ser Phe Gln Lys Glu Ala Thr Phe Leu Leu Pro Ser Leu Phe
  1               5                  10                  15

Leu Val Ser Ser Pro Arg Leu Ala Ile Ala Ile Gly Ile Val Met Ala
            20                  25                  30

Ser Ile Leu Ser Leu Leu His Pro Tyr Leu Leu Leu Cys Asp Phe Ala
        35                  40                  45

Ala Pro Leu Ile Lys Glu Ala Glu Pro Pro Leu Pro Pro Ile Gly Ala
    50                  55                  60
```

```
Gly Phe Glu Ser Asn Arg Met Lys
 65                  70


<210> 61
<211> 84
<212> PRT
<213> Homo sapiens

<400> 61
Val Ser Arg Arg Gln Ala Arg Arg Met Val Thr Glu Thr Ser Arg Arg
  1               5                  10                  15

Arg Arg Ile Gln Glu Leu Glu Glu Arg Arg Arg Arg Phe Val Glu Ala
            20                  25                  30

Cys Arg Ala Arg Glu Ala Ala Phe Asp Ala Glu Tyr Gln Arg Asn Pro
        35                  40                  45

His Arg Val Asp Leu Asp Ile Leu Thr Phe Thr Ile Ala Leu Thr Ala
    50                  55                  60

Ser Glu Val Ile Asn Pro Leu Ile Glu Glu Leu Gly Cys Asp Lys Phe
 65                  70                  75                  80

Ile Asn Arg Glu


<210> 62
<211> 216
<212> PRT
<213> Homo sapiens

<400> 62
Met Asp Phe Glu Phe Ala Ala Trp Gln Met Leu Tyr Leu Phe Thr Ser
  1               5                  10                  15

Pro Gln Arg Val Tyr Arg Asn Phe His Tyr Arg Lys Gln Thr Lys Asp
            20                  25                  30

Gln Trp Ala Arg Asp Asp Pro Ala Phe Leu Val Leu Leu Ser Ile Trp
        35                  40                  45

Leu Cys Val Ser Thr Ile Gly Phe Gly Phe Val Leu Asp Met Gly Phe
    50                  55                  60

Phe Glu Thr Ile Lys Leu Leu Leu Trp Val Val Phe Ile Asp Cys Val
 65                  70                  75                  80

Gly Val Gly Leu Leu Ile Ser Thr Leu Met Trp Phe Ile Ser Asn Lys
                85                  90                  95

Tyr Leu Val Lys Arg Gln Ser Arg Asp Tyr Asp Val Glu Trp Gly Tyr
            100                 105                 110

Ala Phe Asp Val His Leu Asn Ala Phe Tyr Pro Leu Leu Val Ile Leu
        115                 120                 125

His Phe Ile Gln Leu Phe Phe Ile Asn His Val Ile Leu Thr Asp Thr
    130                 135                 140

Phe Ile Gly Tyr Phe Val Gly Asn Thr Leu Trp Leu Val Ala Val Gly
145                 150                 155                 160
```

```
Tyr Tyr Ile Tyr Val Thr Phe Leu Gly Tyr Ser Ala Leu Pro Phe Leu
                165                 170                 175

Lys Asn Thr Val Ile Leu Leu Tyr Pro Phe Ala Pro Leu Ile Leu Leu
            180                 185                 190

Tyr Gly Leu Ser Leu Ala Leu Gly Trp Asn Phe Thr His Thr Leu Cys
        195                 200                 205

Ser Phe Tyr Lys Tyr Arg Val Lys
    210                 215
```

<210> 63
<211> 142
<212> PRT
<213> Homo sapiens

<400> 63

```
Met Met Val Ser Cys Ala Cys Glu His Leu Leu Glu Leu Arg Gly Leu
  1               5                  10                  15

Thr Thr Ser Thr Arg Trp Pro Trp Leu Val Pro His Thr Gly Leu Val
            20                  25                  30

Leu Lys Ile Arg Ser Pro Arg Gln Gly Glu Pro Gly Ala Pro Pro Leu
        35                  40                  45

Ser Val Cys Leu Ser Pro Val Val Ser Leu Cys Cys Cys Leu Cys Leu
    50                  55                  60

Cys Phe Cys Leu Ser Val Ala Met Ser Leu Val Ile Phe Leu Cys Pro
65                  70                  75                  80

Ala Ala Ile Ser Ala Leu Val Thr Ser Thr Leu Leu Ser Pro Arg Asp
                85                  90                  95

Ala Thr His Trp Gly Ser Val Gly Glu Ile Ala Leu Gly Pro His Ala
            100                 105                 110

Ser Ile Pro Gly Trp Leu Cys Leu Pro Val Ser Leu His Val Ser Pro
        115                 120                 125

Cys Val Phe Leu Ser Val Ser Leu Thr Gly Arg Asp Ala Glu
    130                 135                 140
```

<210> 64
<211> 367
<212> PRT
<213> Homo sapiens

<400> 64

```
Met Ser Ser Asn Gly Ile Pro Glu Cys Tyr Ala Glu Glu Asp Glu Phe
  1               5                  10                  15

Ser Gly Leu Glu Thr Asp Thr Ala Val Pro Thr Glu Glu Ala Tyr Val
            20                  25                  30

Ile Tyr Asp Glu Asp Tyr Glu Phe Glu Thr Ser Arg Pro Pro Thr Thr
        35                  40                  45

Thr Glu Pro Ser Thr Thr Ala Thr Thr Pro Arg Val Ile Pro Glu Glu
```

```
     50                  55                  60

Gly Ala Ile Ser Ser Phe Pro Glu Glu Glu Phe Asp Leu Ala Gly Arg
 65                  70                  75                  80

Lys Arg Phe Val Ala Pro Tyr Val Thr Tyr Leu Asn Lys Asp Pro Ser
                 85                  90                  95

Ala Pro Cys Ser Leu Thr Asp Ala Leu Asp His Phe Gln Val Asp Ser
            100                 105                 110

Leu Asp Glu Ile Ile Pro Asn Asp Leu Lys Lys Ser Asp Leu Pro Pro
        115                 120                 125

Gln His Ala Pro Arg Asn Ile Thr Val Val Ala Val Glu Gly Cys His
    130                 135                 140

Ser Phe Val Ile Val Asp Trp Asp Lys Ala Thr Pro Gly Asp Val Val
145                 150                 155                 160

Thr Gly Tyr Leu Val Tyr Ser Ala Ser Tyr Glu Asp Phe Ile Arg Asn
                165                 170                 175

Lys Trp Ser Thr Gln Ala Ser Ser Val Thr His Leu Pro Ile Glu Asn
            180                 185                 190

Leu Lys Pro Asn Thr Arg Tyr Tyr Phe Lys Val Gln Ala Gln Asn Pro
        195                 200                 205

His Gly Tyr Gly Pro Ile Ser Pro Ser Val Ser Phe Val Thr Glu Ser
    210                 215                 220

Asp Asn Pro Leu Leu Val Val Arg Pro Pro Gly Gly Glu Pro Ile Trp
225                 230                 235                 240

Ile Pro Phe Ala Phe Lys His Asp Pro Ser Tyr Thr Asp Cys His Gly
                245                 250                 255

Arg Gln Tyr Val Lys Arg Thr Trp Tyr Arg Lys Phe Val Gly Val Val
            260                 265                 270

Leu Cys Asn Ser Leu Arg Tyr Lys Ile Tyr Leu Ser Asp Asn Leu Lys
        275                 280                 285

Asp Thr Phe Tyr Ser Ile Gly Asp Ser Trp Gly Arg Gly Glu Asp His
    290                 295                 300

Cys Gln Phe Val Asp Ser His Leu Asp Gly Arg Thr Gly Pro Gln Ser
305                 310                 315                 320

Tyr Val Glu Ala Leu Pro Thr Ile Gln Gly Tyr Tyr Arg Gln Tyr Arg
                325                 330                 335

Gln Glu Pro Val Arg Phe Gly Asn Ile Gly Phe Gly Thr Pro Tyr Tyr
            340                 345                 350

Tyr Val Gly Trp Tyr Glu Cys Gly Val Ser Ile Pro Gly Lys Trp
        355                 360                 365
```

<210> 65
<211> 55
<212> PRT
<213> Homo sapiens

<400> 65
Met Met Tyr Cys Ile Leu Lys Tyr Ser Asn Cys Ala Phe Leu Tyr His
1 5 10 15

Leu Gln Tyr Glu Lys Cys Gln Tyr Leu Val Pro Phe Ser Gly Thr Ile
20 25 30

Arg Phe Leu Leu Thr Leu Phe Ser Pro Leu Thr His Val Ile Ser His
35 40 45

Ser Asn Gln Glu Ser Arg Glu
50 55

<210> 66
<211> 46
<212> PRT
<213> Homo sapiens

<400> 66
Met Thr Leu Asn Val Val Asp Ala Ile Ser Ala Cys Gln Arg Gly Gly
1 5 10 15

Phe Leu Gln Ser Val Gln Ser Thr Glu Thr Met Val Arg Val Val Phe
20 25 30

Leu Ile Leu Phe Leu Val Gly Gln Gln Glu Pro Phe Pro Ile
35 40 45

<210> 67
<211> 49
<212> PRT
<213> Homo sapiens

<400> 67
Met Ser Thr Ile Ile Met Val Leu Tyr Ser Arg Ser Lys Cys Ile His
1 5 10 15

Phe Ser Tyr Leu Thr Glu Asn Leu Tyr Leu Leu Thr Asn Ile Ser Leu
20 25 30

Val Pro Pro Ser Pro Pro Leu Val Thr Thr Ile Ile Phe Phe Ser Phe
35 40 45

Phe

<210> 68
<211> 50
<212> PRT
<213> Homo sapiens

<400> 68
Met Leu Asn Phe Leu Trp Gly His Ser Leu Ile Val Pro Ala Ala Ala
1 5 10 15

Thr Gly Ala Ser Leu Glu Ala Ala Cys Ala Lys Thr Thr Gln Leu Ser
20 25 30

Leu Gly Ser His Pro Arg Ala Phe Phe Ala Ser Arg Ser Gly Asp Leu
35 40 45

Leu Gln
50

<210> 69
<211> 49
<212> PRT
<213> Homo sapiens

<400> 69
Met Leu Leu His Phe Cys Tyr Ser Ser Tyr Gln Ser Thr Pro Ile Pro
1 5 10 15

Gln Cys Cys Phe Ile Leu Phe Val Cys Leu Phe Val Phe Glu Val Glu
20 25 30

Ser Val Thr Gln Ala Gly Val His Thr Cys Asn Pro Ser Tyr Ser Gly
35 40 45

Gly

<210> 70
<211> 94
<212> PRT
<213> Homo sapiens

<400> 70
Gly Pro Leu Pro Phe Leu Phe Ser Leu Tyr Pro Pro Pro Lys Arg Ala
1 5 10 15

Gln Lys Lys Val Phe Ile Asn Ile Phe Gly Val Gly Glu Ile Gln Thr
20 25 30

Ser Gln Arg Ile Arg Tyr Pro Gln Leu Lys Cys Thr Gly Thr Phe Val
35 40 45

Ser Glu Phe His Phe Gln Ser Leu Pro Tyr Ile Gly Asn Cys Arg Ser
50 55 60

Glu Leu Val Glu Val Ser Ser Cys Glu Thr Leu Glu Arg Lys Gln Lys
65 70 75 80

Pro His Ala Thr Arg Ser Gly Leu Leu Cys Arg Cys Leu Phe
85 90

<210> 71
<211> 52
<212> PRT
<213> Homo sapiens

<400> 71
Met Thr Met Leu Gln Val Tyr Val Leu Ile Pro Leu Phe Val Ile Ile
1 5 10 15

Leu Glu Cys Thr Pro Thr Asn Tyr Lys Lys Glu Lys Val Asn Cys Lys
20 25 30

Lys Ala Ser Gly Arg Ser Phe Arg Arg His Ser Arg Arg Arg Arg His Cys
35 40 45

Tyr His Arg Arg
50

<210> 72
<211> 41
<212> PRT
<213> Homo sapiens

<400> 72
Met Arg Gly Lys Phe Pro His Asp Leu Leu Cys Phe Leu Ile Lys Leu
1 5 10 15

Leu Cys Pro Thr Ile Ala Gly Ser Ala Tyr Gly Cys Cys Asn Val Gly
20 25 30

Ser Ala Val Ser Cys Ser Tyr His Phe
35 40

<210> 73
<211> 63
<212> PRT
<213> Homo sapiens

<400> 73
Met Arg Gly Leu Ser Gln Phe Tyr Gly Phe Lys Tyr His Leu Asn Ala
1 5 10 15

Trp Asp Thr Gln Met Tyr Ile Pro Asn Ser Asp Cys Pro Pro Asn Ser
20 25 30

Lys Leu Ile Tyr Pro Asn Tyr Leu Phe Gln Ser Pro Leu Gly Tyr Leu
35 40 45

Ile Ile Met Ser His Leu Asp His Ala Asn Ser Ser Gln Ser Arg
50 55 60

<210> 74
<211> 30
<212> PRT
<213> Homo sapiens

<400> 74
Met Arg Cys Thr Pro Gly Phe Gly Leu Gly Thr Ser Gly Phe Ser Gln
1 5 10 15

Gly Arg Leu Glu Val Glu Thr Ser Thr Cys Val Thr Val Val
20 25 30

<210> 75
<211> 46
<212> PRT
<213> Homo sapiens

<400> 75
Met Thr Tyr Ser Phe Trp Gln Lys Lys Phe Pro Phe Pro Arg Gln Ile
1 5 10 15

Lys Leu Val Gln Gly Arg Ile Leu Ser Thr Glu Ile Leu Gly Asn Pro
20 25 30

Ala Arg Glu Arg Glu Ser Leu Leu Leu Cys Phe Leu Leu Pro
35 40 45

<210> 76
<211> 71
<212> PRT
<213> Homo sapiens

<400> 76
Met Val Gln Cys Pro Arg Thr Ser Lys Asp Gly Asp Leu Leu Ser Pro
1 5 10 15

Ser Leu Arg Asp Glu Arg Arg His Trp Leu Cys Arg Arg Pro Gly Glu
20 25 30

Arg Trp Asn Trp Arg Trp Gly Cys Trp Gln Glu Leu Trp Pro Gln Lys
35 40 45

Glu Gly Ser Ser His Cys Leu Thr Cys Asp Gln Thr Arg Arg Glu Gln
50 55 60

Gly Trp Trp Gly Ser Asp Thr
65 70

<210> 77
<211> 51
<212> PRT
<213> Homo sapiens

<400> 77
Met Phe Arg Asp Leu Ser Glu Lys Leu Ala Trp Phe Glu Gly Thr Gln
1 5 10 15

Tyr His Phe Asn Leu Leu Lys Ile Ser Val Phe Leu Leu Phe Phe Cys
20 25 30

Cys His Cys Gln Ser Ala Ile Phe Phe Thr Ile Leu Leu Lys Tyr Tyr
35 40 45

Cys Leu Leu
50

<210> 78
<211> 107
<212> PRT
<213> Homo sapiens

<400> 78
Met Pro Leu Gly Cys Arg Glu Glu Ala Gly Gly Val Met Gly Met Gly
1 5 10 15

Ser Gly Arg Gly Arg Glu Gly Pro Ser Thr Lys Ala Trp Glu Met Arg
20 25 30

Gly Gly Gly Gly Arg Ala Gly Glu Ala Lys Ser Gln Pro Trp Arg Glu
35 40 45

```
His Pro Gly Ala Ser Val Ser Gly Tyr Thr Gln His Phe Ala Thr Cys
     50                  55                  60

Gly Pro Ala Gly Ala Glu Asp Gly Gly Glu Glu Ala Ser Ser Pro Cys
 65                  70                  75                  80

Val Tyr Cys Arg Gln Lys Gly Leu Val Phe Trp Phe Trp Gly Phe Cys
                85                  90                  95

Phe Val Cys Val Leu Phe Gly Leu Phe Val Phe
            100                 105
```

```
<210> 79
<211> 105
<212> PRT
<213> Homo sapiens
```

```
<400> 79
Met Glu Ala Gly Glu Pro Gly Gly Leu Gly Gln Pro Trp Asp Gly Ser
  1               5                  10                  15

Trp Ile Glu Glu Ser Arg Gly Val Met Arg Val Pro Ser Gly Leu Gly
            20                  25                  30

Ser Leu Leu Leu Val Ser Asp Pro Pro Pro Phe Ser Ser Gln Ala Leu
        35                  40                  45

Gly Ala Pro Gly Ser Glu Asp Ser Trp Glu Ser Ser Leu Arg Gln Val
    50                  55                  60

Gln Gly Gln Ser Ser Asp Pro Gly Pro Gly Leu Leu Trp Val Pro Met
65                  70                  75                  80

Asn Ser Ala Ser Gly Ser Glu Gln Phe Pro Ala Pro Leu Pro Glu Pro
                85                  90                  95

Ser Val Leu Trp Asn Pro Trp Ala Gly
            100                 105
```

```
<210> 80
<211> 67
<212> PRT
<213> Homo sapiens
```

```
<400> 80
Met Cys Val Leu Met Ser Tyr Phe Gln Ser Cys Ala Leu Asn Gln Ser
  1               5                  10                  15

Trp His Thr Gly Ser Val Tyr Ile Lys Phe His Leu Ala Thr Asp Gly
            20                  25                  30

Gln Lys Ile Glu Met Pro Ser Tyr Gly Glu Tyr Phe Ser Phe Lys Lys
        35                  40                  45

Leu Lys Arg Leu Ile Ile Leu Lys Lys Lys Asn Arg Pro Thr Arg Pro
    50                  55                  60

Asp Tyr Met
65
```

<210> 81
<211> 38
<212> PRT
<213> Homo sapiens

<400> 81
Met Leu Trp Arg Cys Phe Val Ile Phe Lys Ile Cys Pro Tyr Cys Leu
1 5 10 15

Phe Lys Thr Pro Lys Ile Met Asn Ser Glu Thr His Pro Ala Gln Arg
20 25 30

Val Leu Asp Lys Gly Leu
35

<210> 82
<211> 106
<212> PRT
<213> Homo sapiens

<400> 82
Gly Thr Arg Pro Pro Ala Pro Val Thr Leu Thr His Thr Gly Leu Gly
1 5 10 15

Ala Gly Ile Phe Phe Ala Ile Ile Leu Val Thr Gly Ala Val Ala Leu
20 25 30

Ala Ala Tyr Ser Tyr Phe Arg Ile Asn Arg Arg Thr Ile Gly Phe Gln
35 40 45

His Phe Glu Ser Glu Glu Asp Ile Asn Val Ala Ala Leu Gly Lys Gln
50 55 60

Gln Pro Glu Asn Ile Ser Asn Pro Leu Tyr Glu Ser Thr Thr Ser Ala
65 70 75 80

Pro Pro Glu Pro Ser Tyr Asp Pro Phe Thr Asp Ser Glu Glu Arg Gln
85 90 95

Leu Glu Gly Asn Asp Pro Leu Arg Thr Leu
100 105

<210> 83
<211> 124
<212> PRT
<213> Homo sapiens

<400> 83
His Glu Ser Leu Phe Ile Glu Gly Val Ser Gly Cys Ser Leu Leu Ser
1 5 10 15

Ala Glu Thr Leu Ser Cys Pro Cys Ser Leu Val Trp Asn Gly Ser Arg
20 25 30

Val Thr Val Lys Glu Leu Asn Leu Pro Thr His Pro His Cys Ser Arg
35 40 45

Leu Arg Leu Ala Asp Leu Leu Ile Ala Glu Gln Glu His Ser Ser Lys
50 55 60

Leu Arg His Pro Tyr Leu Leu Gln Leu Met Ala Val Cys Leu Ser Gln
65 70 75 80

```
Asp Leu Glu Lys Thr Arg Leu Val Tyr Glu Arg Ile Thr Ile Gly Thr
                85                  90                  95

Leu Phe Ser Val Leu His Glu Arg Val Asn Cys Cys Phe Arg Gly Phe
            100                 105                 110

Ser Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys
        115                 120
```

<210> 84
<211> 261
<212> PRT
<213> Homo sapiens

<400> 84

```
Met Ser Gly Glu Ile Ala Met Cys Glu Pro Glu Phe Gly Asn Asp Lys
  1               5                  10                  15

Ala Arg Glu Pro Ser Val Gly Gly Arg Trp Arg Val Ser Trp Tyr Glu
            20                  25                  30

Arg Phe Val Gln Pro Cys Leu Val Glu Leu Leu Gly Ser Ala Leu Phe
        35                  40                  45

Ile Phe Ile Gly Cys Leu Ser Val Ile Glu Asn Gly Thr Asp Thr Gly
    50                  55                  60

Leu Leu Gln Pro Ala Leu Ala His Gly Leu Ala Leu Gly Leu Val Ile
65                  70                  75                  80

Ala Thr Leu Gly Asn Ile Ser Gly Gly His Phe Asn Pro Ala Val Ser
                85                  90                  95

Leu Ala Ala Met Leu Ile Gly Gly Leu Asn Leu Val Met Leu Leu Pro
            100                 105                 110

Tyr Trp Val Ser Gln Leu Leu Gly Gly Met Leu Gly Ala Ala Leu Ala
        115                 120                 125

Lys Ala Val Ser Pro Glu Glu Arg Phe Trp Asn Ala Ser Gly Ala Ala
    130                 135                 140

Phe Val Thr Val Gln Glu Gln Gly Gln Val Ala Gly Ala Leu Val Ala
145                 150                 155                 160

Glu Ile Ile Leu Thr Thr Leu Leu Ala Leu Ala Val Cys Met Gly Ala
                165                 170                 175

Ile Asn Glu Lys Thr Lys Gly Pro Leu Ala Pro Phe Ser Ile Gly Phe
            180                 185                 190

Ala Val Thr Val Asp Ile Leu Ala Gly Gly Pro Val Ser Gly Gly Cys
        195                 200                 205

Met Asn Pro Ala Arg Ala Phe Gly Pro Ala Val Val Ala Asn His Trp
    210                 215                 220

Asn Phe His Trp Ile Tyr Trp Leu Gly Pro Leu Leu Ala Gly Leu Leu
225                 230                 235                 240

Val Gly Leu Leu Ile Arg Cys Phe Ile Gly Asp Gly Lys Thr Arg Leu
                245                 250                 255
```

Ile Leu Lys Ala Gln
260

<210> 85
<211> 310
<212> PRT
<213> Homo sapiens

<400> 85
Met Met Thr Lys Tyr Ser Asn Leu Ser Leu Glu Ser His Asn Phe Ser
1 5 10 15

Leu Thr Ala Ser Pro Leu Thr Ser Leu Pro Ile Pro Glu Val Met Met
20 25 30

Thr Lys Tyr Ser Asn Leu Phe Leu Glu Ser His Asn Ile Ser Leu Thr
35 40 45

Glu His Ser Ser Val Pro Val Glu Lys Asn Ile Thr Leu Glu Arg Pro
50 55 60

Ser Ala Val Glu Leu Thr Cys Gln Phe Thr Thr Ser Gly Asp Val Asn
65 70 75 80

Ser Val Asn Val Thr Trp Lys Lys Gly Asp Glu Gln Leu Lys Asn Tyr
85 90 95

His Val Ser Ala Thr Glu Gly Ile Leu Tyr Thr Gln Tyr Lys Phe Ser
100 105 110

Ile Ile Asn Ser Glu Gln Leu Gly Ser Tyr Ser Cys Phe Phe Glu Glu
115 120 125

Glu Lys Glu Arg Arg Gly Thr Phe Asn Phe Gly Val Pro Glu Val Gln
130 135 140

Arg Lys Asn Lys Pro Leu Ile Thr Tyr Val Gly Asp Ser Val Val Leu
145 150 155 160

Val Cys Lys Cys Arg His Cys Ala Pro Leu Asn Trp Thr Trp Tyr Ser
165 170 175

Gly Asn Arg Ser Val Gln Val Pro Leu Asp Val His Met Asn Glu Lys
180 185 190

Tyr Ala Ile Asn Gly Thr Asn Ala Asn Glu Thr Arg Leu Lys Ile Met
195 200 205

Gln Leu Ser Glu Asp Asp Lys Gly Ser Tyr Trp Cys His Ala Met Phe
210 215 220

Gln Leu Gly Glu Ser Gln Glu Ser Val Glu Leu Val Val Ile Ser Tyr
225 230 235 240

Leu Val Pro Leu Lys Pro Phe Leu Gly Ile Val Val Glu Val Ile Leu
245 250 255

Leu Val Ala Ile Ile Leu Phe Cys Glu Met His Thr Gln Lys Lys Lys
260 265 270

Met His Met Asp Asp Gly Lys Glu Phe Glu Gln Val Glu Gln Leu Lys
275 280 285

Ser Asp Asp Ser Asn Gly Ile Glu Asn Asn Ala Pro Arg His Arg Lys

290 295 300

Asn Glu Ala Met Ser Gln
305 310

<210> 86
<211> 135
<212> PRT
<213> Homo sapiens

<400> 86
Met His Ile Trp Val Cys Thr Phe Leu Phe Ile Ile His Phe Ser Pro
1 5 10 15

Phe Ser Ile Lys Glu His Ala Leu Gly Glu Leu Leu Ile Ala His Gln
20 25 30

Ser Gly Arg Gln His Ser Ile Leu Leu Cys Leu Leu Ser Pro Pro Val
35 40 45

Glu Val Phe Leu Leu Lys Gln Arg Arg Asn Arg Gln Ile Arg Leu Ala
50 55 60

Leu Leu Glu Met Trp Ser Arg Phe Leu Tyr Ser Gln Ala Pro Lys Lys
65 70 75 80

Ala Tyr Ile Gly Trp Ala Arg Ser Thr Pro Pro Glu Ser His Lys Ser
85 90 95

Ala Lys Ser Cys Phe Pro Cys Lys Gly Val Val Gln Trp Gly Thr Pro
100 105 110

Asp Val Gly Gly Lys Gln Glu Asp Phe Arg Val Glu Leu His Ser Asn
115 120 125

Leu Ser Ala Ala Ser Thr Met
130 135

<210> 87
<211> 257
<212> PRT
<213> Homo sapiens

<400> 87
His Pro Ser Ala Pro Arg Ala Gly Lys Ala His Leu Lys Arg Ala Ile
1 5 10 15

Leu Gly Gln Glu Glu Ala Leu Arg Leu His Ala Leu Cys Arg Val Leu
20 25 30

Arg Glu Val Asp Leu Leu Arg Ala Val Ile Ser Gln Thr Leu Gln Arg
35 40 45

Ser Leu Ala Lys Tyr Ala Glu Leu Asp Arg Glu Asp Asp Phe Cys Glu
50 55 60

Ala Ala Glu Ala Pro Asp Ile Gln Pro Lys Thr His Gln Lys Pro Glu
65 70 75 80

Ala Arg Met Pro Arg Leu Ser Gln Gly Lys Gly Pro Asp Ile Phe His
85 90 95

```
Arg Leu Gly Pro Leu Ser Val Phe Ser Ala Lys Asn Arg Trp Arg Leu
            100                 105                 110

Val Gly Pro Val His Leu Thr Arg Gly Glu Gly Gly Phe Gly Leu Thr
        115                 120                 125

Leu Arg Gly Asp Ser Pro Val Leu Ile Ala Ala Val Ile Pro Gly Ser
    130                 135                 140

Gln Ala Ala Ala Ala Gly Leu Lys Glu Gly Asp Tyr Ile Val Ser Val
145                 150                 155                 160

Asn Gly Gln Pro Cys Arg Trp Trp Arg His Ala Glu Val Val Thr Glu
                165                 170                 175

Leu Lys Ala Ala Gly Glu Ala Gly Ala Ser Leu Gln Val Val Ser Leu
            180                 185                 190

Leu Pro Ser Ser Arg Leu Pro Ser Leu Gly Asp Arg Arg Pro Val Leu
        195                 200                 205

Leu Gly Pro Arg Gly Leu Leu Arg Ser Gln Arg Glu His Gly Cys Lys
    210                 215                 220

Thr Pro Ala Ser Thr Trp Ala Ser Pro Arg Ala Leu Leu Asn Trp Ser
225                 230                 235                 240

Arg Lys Ala Gln Gln Gly Lys Thr Gly Gly Cys Pro Ser Pro Val Pro
                245                 250                 255

Gln
```


<210> 88
<211> 84
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (28)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 88

```
Val Ser Arg Arg Gln Ala Arg Arg Met Val Thr Glu Thr Ser Arg Arg
  1               5                  10                  15

Arg Arg Ile Gln Glu Leu Glu Glu Arg Arg Arg Xaa Phe Val Glu Ala
            20                  25                  30

Cys Arg Ala Arg Glu Ala Ala Phe Asp Ala Glu Tyr Gln Arg Asn Pro
        35                  40                  45

His Arg Val Asp Leu Asp Ile Leu Thr Phe Thr Ile Ala Leu Thr Ala
    50                  55                  60

Ser Glu Val Ile Asn Pro Leu Ile Glu Glu Leu Gly Cys Asp Lys Phe
65                  70                  75                  80

Ile Asn Arg Glu
```

<210> 89
<211> 42
<212> PRT
<213> Homo sapiens

<400> 89
His Glu Ile Gln Gly Tyr Tyr Arg Gln Tyr Arg Gln Glu Pro Val Arg
1 5 10 15

Phe Gly Asn Ile Gly Phe Gly Thr Pro Tyr Tyr Tyr Val Gly Trp Tyr
20 25 30

Glu Cys Gly Val Ser Ile Pro Gly Lys Trp
35 40

<210> 90
<211> 55
<212> PRT
<213> Homo sapiens

<400> 90
Met Met Tyr Cys Ile Leu Lys Tyr Ser Asn Cys Ala Phe Leu Tyr His
1 5 10 15

Leu Gln Tyr Glu Lys Cys Gln Tyr Leu Val Pro Phe Ser Gly Thr Ile
20 25 30

Arg Phe Leu Leu Thr Leu Phe Ser Pro Leu Thr His Val Ile Ser His
35 40 45

Ser Asn Gln Glu Ser Arg Glu
50 55

<210> 91
<211> 46
<212> PRT
<213> Homo sapiens

<400> 91
Met Thr Leu Asn Val Val Asp Ala Ile Ser Ala Cys Gln Arg Gly Gly
1 5 10 15

Phe Leu Gln Ser Val Gln Ser Thr Glu Thr Met Val Arg Val Val Phe
20 25 30

Leu Ile Leu Phe Leu Val Gly Gln Gln Glu Pro Phe Pro Ile
35 40 45

<210> 92
<211> 50
<212> PRT
<213> Homo sapiens

<400> 92
Met Leu Asn Phe Leu Trp Gly His Ser Leu Ile Val Pro Ala Ala Ala
1 5 10 15

Thr Gly Ala Ser Leu Glu Ala Ala Cys Ala Lys Thr Thr Gln Leu Ser
20 25 30

Leu Gly Ser His Pro Arg Ala Phe Phe Ala Ser Arg Ser Gly Asp Leu
35 40 45

Leu Gln
50

<210> 93
<211> 38
<212> PRT
<213> Homo sapiens

<400> 93
Met Pro Gln Ala Thr Tyr Pro Gly Glu Ser Leu Pro Val Leu Leu His
1 5 10 15

Glu Phe Leu Ser His Arg Met His Val Pro Leu His Phe Val Thr Ser
20 25 30

Val Ser Pro Thr Arg Gln
35

<210> 94
<211> 30
<212> PRT
<213> Homo sapiens

<400> 94
Met Arg Cys Thr Pro Gly Phe Gly Leu Gly Thr Ser Gly Phe Ser Gln
1 5 10 15

Gly Arg Leu Glu Val Glu Thr Ser Thr Cys Val Thr Val Val
20 25 30

<210> 95
<211> 51
<212> PRT
<213> Homo sapiens

<400> 95
Met Phe Arg Asp Leu Ser Glu Lys Leu Ala Trp Phe Glu Gly Thr Gln
1 5 10 15

Tyr His Phe Asn Leu Leu Lys Ile Ser Val Phe Leu Leu Phe Phe Cys
20 25 30

Cys His Cys Gln Ser Ala Ile Phe Phe Thr Ile Leu Leu Lys Tyr Tyr
35 40 45

Cys Leu Leu
50

<210> 96
<211> 68
<212> PRT
<213> Homo sapiens

<400> 96
Met Phe Arg Asp Leu Ser Glu Lys Leu Ala Trp Phe Glu Gly Thr Gln

```
  1               5                  10                  15

Tyr His Phe Asn Leu Leu Lys Ile Ser Val Phe Leu Leu Phe Phe Cys
            20                  25                  30

Cys His Cys Gln Ser Ala Ile Phe Phe Thr Ile Leu Leu Lys Tyr Tyr
        35                  40                  45

Cys Leu Leu Tyr Leu Phe Asn Val His Ile Leu Lys Lys Ser Ser Leu
    50                  55                  60

Tyr Glu Leu Phe
 65
```

<210> 97
<211> 63
<212> PRT
<213> Homo sapiens

<400> 97

```
Met Ser Tyr Phe Gln Ser Cys Ala Leu Asn Gln Ser Trp His Thr Gly
  1               5                  10                  15

Ser Val Tyr Ile Lys Phe His Leu Ala Thr Asp Gly Gln Lys Ile Glu
            20                  25                  30

Met Pro Ser Tyr Gly Glu Tyr Phe Ser Phe Lys Lys Leu Lys Arg Leu
        35                  40                  45

Ile Ile Leu Lys Lys Lys Asn Arg Pro Thr Arg Pro Asp Tyr Met
    50                  55                  60
```

<210> 98
<211> 75
<212> PRT
<213> Homo sapiens

<400> 98

```
Ile Arg His Glu Ser Leu Phe Ile Glu Gly Val Ser Gly Cys Ser Leu
  1               5                  10                  15

Leu Ser Ala Glu Thr Leu Ser Cys Pro Cys Ser Leu Val Trp Asn Gly
            20                  25                  30

Ser Arg Val Thr Val Lys Glu Leu Asn Leu Pro Thr His Pro His Cys
        35                  40                  45

Ser Arg Leu Arg Leu Ala Asp Leu Leu Ile Ala Glu Gln Glu His Ser
    50                  55                  60

Ser Lys Leu Arg Ala Pro Leu Thr Cys Tyr Ser
 65                  70                  75
```

<210> 99
<211> 9
<212> PRT
<213> Homo sapiens

<400> 99

```
His Phe Asn Pro Ala Val Ser Leu Ala
```

1 5

<210> 100
<211> 9
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (1)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (2)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (5)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (6)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (7)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (8)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (9)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 100
Xaa Xaa Asn Pro Xaa Xaa Xaa Xaa Xaa
1 5

<210> 101
<211> 38
<212> PRT
<213> Homo sapiens

<400> 101
Met Ser Gly Glu Ile Ala Met Cys Glu Pro Glu Phe Gly Asn Asp Lys
1 5 10 15

Ala Arg Glu Pro Ser Val Gly Gly Arg Trp Arg Val Ser Trp Tyr Glu
20 25 30

Arg Phe Val Gln Pro Cys
35

<210> 102
<211> 16
<212> PRT
<213> Homo sapiens

<400> 102
Leu Val Glu Leu Leu Gly Ser Ala Leu Phe Ile Phe Ile Gly Cys Leu
1 5 10 15

<210> 103
<211> 10
<212> PRT
<213> Homo sapiens

<400> 103
Ser Val Ile Glu Asn Gly Thr Asp Thr Gly
1 5 10

<210> 104
<211> 17
<212> PRT
<213> Homo sapiens

<400> 104
Leu Leu Gln Pro Ala Leu Ala His Gly Leu Ala Leu Gly Leu Val Ile
1 5 10 15

Ala

<210> 105
<211> 13
<212> PRT
<213> Homo sapiens

<400> 105
Thr Leu Gly Asn Ile Ser Gly Gly His Phe Asn Pro Ala
1 5 10

<210> 106
<211> 17
<212> PRT
<213> Homo sapiens

<400> 106
Val Ser Leu Ala Ala Met Leu Ile Gly Gly Leu Asn Leu Val Met Leu
1 5 10 15

Leu

<210> 107

<211> 46
<212> PRT
<213> Homo sapiens

<400> 107
Pro Tyr Trp Val Ser Gln Leu Leu Gly Gly Met Leu Gly Ala Ala Leu
1 5 10 15

Ala Lys Ala Val Ser Pro Glu Glu Arg Phe Trp Asn Ala Ser Gly Ala
20 25 30

Ala Phe Val Thr Val Gln Glu Gln Gly Gln Val Ala Gly Ala
35 40 45

<210> 108
<211> 17
<212> PRT
<213> Homo sapiens

<400> 108
Leu Val Ala Glu Ile Ile Leu Thr Thr Leu Leu Ala Leu Ala Val Cys
1 5 10 15

Met

<210> 109
<211> 10
<212> PRT
<213> Homo sapiens

<400> 109
Gly Ala Ile Asn Glu Lys Thr Lys Gly Pro
1 5 10

<210> 110
<211> 17
<212> PRT
<213> Homo sapiens

<400> 110
Leu Ala Pro Phe Ser Ile Gly Phe Ala Val Thr Val Asp Ile Leu Ala
1 5 10 15

Gly

<210> 111
<211> 27
<212> PRT
<213> Homo sapiens

<400> 111
Gly Pro Val Ser Gly Gly Cys Met Asn Pro Ala Arg Ala Phe Gly Pro
1 5 10 15

Ala Val Val Ala Asn His Trp Asn Phe His Trp
20 25

<210> 112
<211> 17
<212> PRT
<213> Homo sapiens

<400> 112
Ile Tyr Trp Leu Gly Pro Leu Leu Ala Gly Leu Leu Val Gly Leu Leu
1 5 10 15

Ile

<210> 113
<211> 16
<212> PRT
<213> Homo sapiens

<400> 113
Arg Cys Phe Ile Gly Asp Gly Lys Thr Arg Leu Ile Leu Lys Ala Gln
1 5 10 15

<210> 114
<211> 320
<212> PRT
<213> Homo sapiens

<400> 114
Phe Pro Gly Arg Pro Thr Arg Pro Glu Val Met Met Thr Lys Tyr Ser
1 5 10 15

Asn Leu Ser Leu Glu Ser His Asn Phe Ser Leu Thr Ala Ser Pro Leu
20 25 30

Thr Ser Leu Pro Ile Pro Glu Val Met Met Thr Lys Tyr Ser Asn Leu
35 40 45

Phe Leu Glu Ser His Asn Ile Ser Leu Thr Glu His Ser Ser Val Pro
50 55 60

Val Glu Lys Asn Ile Thr Leu Glu Arg Pro Ser Ala Val Glu Leu Thr
65 70 75 80

Cys Gln Phe Thr Thr Ser Gly Asp Val Asn Ser Val Asn Val Thr Trp
85 90 95

Lys Lys Gly Asp Glu Gln Leu Lys Asn Tyr His Val Ser Ala Thr Glu
100 105 110

Gly Ile Leu Tyr Thr Gln Tyr Lys Phe Ser Ile Ile Asn Ser Glu Gln
115 120 125

Leu Gly Ser Tyr Ser Cys Phe Phe Glu Glu Glu Lys Glu Arg Arg Gly
130 135 140

Thr Phe Asn Phe Gly Val Pro Glu Val Gln Arg Lys Asn Lys Pro Leu
145 150 155 160

```
Ile Thr Tyr Val Gly Asp Ser Val Val Leu Val Cys Lys Cys Arg His
                165                 170                 175

Cys Ala Pro Leu Asn Trp Thr Trp Tyr Ser Gly Asn Arg Ser Val Gln
            180                 185                 190

Val Pro Leu Asp Val His Met Asn Glu Lys Tyr Ala Ile Asn Gly Thr
        195                 200                 205

Asn Ala Asn Glu Thr Arg Leu Lys Ile Met Gln Leu Ser Glu Asp Asp
    210                 215                 220

Lys Gly Ser Tyr Trp Cys His Ala Met Phe Gln Leu Gly Glu Ser Gln
225                 230                 235                 240

Glu Ser Val Glu Leu Val Val Ile Ser Tyr Leu Val Pro Leu Lys Pro
                245                 250                 255

Phe Leu Gly Ile Val Val Glu Val Ile Leu Leu Val Ala Ile Ile Leu
            260                 265                 270

Phe Cys Glu Met His Thr Gln Lys Lys Lys Met His Met Asp Asp Gly
        275                 280                 285

Lys Glu Phe Glu Gln Val Glu Gln Leu Lys Ser Asp Asp Ser Asn Gly
    290                 295                 300

Ile Glu Asn Asn Ala Pro Arg His Arg Lys Asn Glu Ala Met Ser Gln
305                 310                 315                 320
```

<210> 115
<211> 256
<212> PRT
<213> Homo sapiens

```
<400> 115
Phe Pro Gly Arg Pro Thr Arg Pro Glu Val Met Met Thr Lys Tyr Ser
  1               5                  10                  15

Asn Leu Ser Leu Glu Ser His Asn Phe Ser Leu Thr Ala Ser Pro Leu
            20                  25                  30

Thr Ser Leu Pro Ile Pro Glu Val Met Met Thr Lys Tyr Ser Asn Leu
        35                  40                  45

Phe Leu Glu Ser His Asn Ile Ser Leu Thr Glu His Ser Ser Val Pro
    50                  55                  60

Val Glu Lys Asn Ile Thr Leu Glu Arg Pro Ser Ala Val Glu Leu Thr
65                  70                  75                  80

Cys Gln Phe Thr Thr Ser Gly Asp Val Asn Ser Val Asn Val Thr Trp
                85                  90                  95

Lys Lys Gly Asp Glu Gln Leu Lys Asn Tyr His Val Ser Ala Thr Glu
            100                 105                 110

Gly Ile Leu Tyr Thr Gln Tyr Lys Phe Ser Ile Ile Asn Ser Glu Gln
        115                 120                 125
```

```
Leu Gly Ser Tyr Ser Cys Phe Phe Glu Glu Glu Lys Glu Arg Arg Gly
    130                 135                 140

Thr Phe Asn Phe Gly Val Pro Glu Val Gln Arg Lys Asn Lys Pro Leu
145                 150                 155                 160

Ile Thr Tyr Val Gly Asp Ser Val Val Leu Val Cys Lys Cys Arg His
                165                 170                 175

Cys Ala Pro Leu Asn Trp Thr Trp Tyr Ser Gly Asn Arg Ser Val Gln
            180                 185                 190

Val Pro Leu Asp Val His Met Asn Glu Lys Tyr Ala Ile Asn Gly Thr
        195                 200                 205

Asn Ala Asn Glu Thr Arg Leu Lys Ile Met Gln Leu Ser Glu Asp Asp
    210                 215                 220

Lys Gly Ser Tyr Trp Cys His Ala Met Phe Gln Leu Gly Glu Ser Gln
225                 230                 235                 240

Glu Ser Val Glu Leu Val Val Ile Ser Tyr Leu Val Pro Leu Lys Pro
                245                 250                 255
```

<210> 116
<211> 17
<212> PRT
<213> Homo sapiens

<400> 116
Phe Leu Gly Ile Val Val Glu Val Ile Leu Leu Val Ala Ile Ile Leu
  1   5   10   15

Phe

<210> 117
<211> 47
<212> PRT
<213> Homo sapiens

<400> 117
Cys Glu Met His Thr Gln Lys Lys Lys Met His Met Asp Asp Gly Lys
  1   5   10   15

Glu Phe Glu Gln Val Glu Gln Leu Lys Ser Asp Asp Ser Asn Gly Ile
            20   25   30

Glu Asn Asn Ala Pro Arg His Arg Lys Asn Glu Ala Met Ser Gln
        35   40   45

<210> 118
<211> 246
<212> PRT
<213> Homo sapiens

<400> 118

```
Met Met Thr Lys Tyr Ser Asn Leu Ser Leu Glu Ser His Asn Phe Ser
  1               5                  10                  15

Leu Thr Ala Ser Pro Leu Thr Ser Leu Pro Ile Pro Glu Val Met Met
            20                  25                  30

Thr Lys Tyr Ser Asn Leu Phe Leu Glu Ser His Asn Ile Ser Leu Thr
        35                  40                  45

Glu His Ser Ser Val Pro Val Glu Lys Asn Ile Thr Leu Glu Arg Pro
    50                  55                  60

Ser Ala Val Glu Leu Thr Cys Gln Phe Thr Thr Ser Gly Asp Val Asn
65                  70                  75                  80

Ser Val Asn Val Thr Trp Lys Lys Gly Asp Glu Gln Leu Lys Asn Tyr
                85                  90                  95

His Val Ser Ala Thr Glu Gly Ile Leu Tyr Thr Gln Tyr Lys Phe Ser
            100                 105                 110

Ile Ile Asn Ser Glu Gln Leu Gly Ser Tyr Ser Cys Phe Phe Glu Glu
        115                 120                 125

Glu Lys Glu Arg Arg Gly Thr Phe Asn Phe Gly Val Pro Glu Val Gln
    130                 135                 140

Arg Lys Asn Lys Pro Leu Ile Thr Tyr Val Gly Asp Ser Val Val Leu
145                 150                 155                 160

Val Cys Lys Cys Arg His Cys Ala Pro Leu Asn Trp Thr Trp Tyr Ser
                165                 170                 175

Gly Asn Arg Ser Val Gln Val Pro Leu Asp Val His Met Asn Glu Lys
            180                 185                 190

Tyr Ala Ile Asn Gly Thr Asn Ala Asn Glu Thr Arg Leu Lys Ile Met
        195                 200                 205

Gln Leu Ser Glu Asp Asp Lys Gly Ser Tyr Trp Cys His Ala Met Phe
    210                 215                 220

Gln Leu Gly Glu Ser Gln Glu Ser Val Glu Leu Val Val Ile Ser Tyr
225                 230                 235                 240

Leu Val Pro Leu Lys Pro
                245
```

<210> 119
<211> 81
<212> PRT
<213> Homo sapiens

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<400> 119
Gly His Ser Leu Thr Cys Tyr Ala Cys Ile Asp Arg Glu Thr Cys Asn
  1               5                  10                  15

Lys Thr Thr Val Cys Ser Val Asn His Asp Ala Cys Leu Leu Val Lys
            20                  25                  30

Ala Asp Pro Lys Leu Phe Tyr Arg Gln Cys Trp Lys Phe Asp Asp Cys
        35                  40                  45

Ser Tyr Leu Ser Ile Ser Lys Ala Leu Gly Leu Lys Lys Leu Gln Tyr
```

```
     50                  55                  60

Ser Cys Cys Gln Lys Asp Leu Cys Asn Gly Ser Ala Arg Val Ser Gly
 65                  70                  75                  80

Met
```

<210> 120
<211> 78
<212> PRT
<213> Homo sapiens

<400> 120

```
Leu Thr Cys Tyr Ala Cys Ile Asp Arg Glu Thr Cys Asn Lys Thr Thr
  1               5                  10                  15

Val Cys Ser Val Asn His Asp Ala Cys Leu Leu Val Lys Ala Asp Pro
            20                  25                  30

Lys Leu Phe Tyr Arg Gln Cys Trp Lys Phe Asp Asp Cys Ser Tyr Leu
        35                  40                  45

Ser Ile Ser Lys Ala Leu Gly Leu Lys Lys Leu Gln Tyr Ser Cys Cys
    50                  55                  60

Gln Lys Asp Leu Cys Asn Gly Ser Ala Arg Val Ser Gly Met
 65                  70                  75
```

<210> 121
<211> 18
<212> PRT
<213> Homo sapiens

<400> 121

```
Leu Asn Ser Arg Asp Ala Ala Arg His Thr Ala Glu Gln Asn Ala Thr
  1               5                  10                  15

Asn Thr
```

<210> 122
<211> 15
<212> PRT
<213> Homo sapiens

<400> 122

```
Met Leu Pro Ser Ile Ser Val Asn Ser Pro Met Gln Gly Asn Gly
  1               5                  10                  15
```

<210> 123
<211> 13
<212> PRT
<213> Homo sapiens

<400> 123

```
Gly Phe Val Leu Asp Met Gly Phe Phe Glu Thr Ile Lys
  1               5                  10
```

<210> 124
<211> 37
<212> PRT
<213> Homo sapiens

<400> 124
Ser Thr Leu Met Trp Phe Ile Ser Asn Lys Tyr Leu Val Lys Arg Gln
1 5 10 15

Ser Arg Asp Tyr Asp Val Glu Trp Gly Tyr Ala Phe Asp Val His Leu
20 25 30

Asn Ala Phe Tyr Pro
35

<210> 125
<211> 12
<212> PRT
<213> Homo sapiens

<400> 125
Leu Thr Asp Thr Phe Ile Gly Tyr Phe Val Gly Asn
1 5 10

<210> 126
<211> 9
<212> PRT
<213> Homo sapiens

<400> 126
Tyr Ser Ala Leu Pro Phe Leu Lys Asn
1 5

<210> 127
<211> 21
<212> PRT
<213> Homo sapiens

<400> 127
Ser Leu Ala Leu Gly Trp Asn Phe Thr His Thr Leu Cys Ser Phe Tyr
1 5 10 15

Lys Tyr Arg Val Lys
20

<210> 128
<211> 249
<212> PRT
<213> Homo sapiens

<220>
<221> SITE
<222> (4)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (5)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (18)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (28)
<223> Xaa equals any of the naturally occurring L-amino acids

<220>
<221> SITE
<222> (35)
<223> Xaa equals any of the naturally occurring L-amino acids

<400> 128
Met Leu Pro Xaa Xaa Pro Trp Asn Ser Pro Met Pro Gly Asn Gly Cys
1 5 10 15

Trp Xaa Ser Arg Gly Cys Gln Gln Asp Thr Gln Xaa Ser Lys Thr Leu
20 25 30

Pro Ile Xaa Glu Lys Thr Phe Ser Phe Ser Gln Met Asp Phe Glu Phe
35 40 45

Ala Ala Trp Gln Met Leu Tyr Leu Phe Thr Ser Pro Gln Arg Val Tyr
50 55 60

Arg Asn Phe His Tyr Arg Lys Gln Thr Lys Asp Gln Trp Ala Arg Asp
65 70 75 80

Asp Pro Ala Phe Leu Val Leu Leu Ser Ile Trp Leu Cys Val Ser Thr
85 90 95

Ile Gly Phe Gly Phe Val Leu Asp Met Gly Phe Phe Glu Thr Ile Lys
100 105 110

Leu Leu Leu Trp Val Val Phe Ile Asp Cys Val Gly Val Gly Leu Leu
115 120 125

Ile Ser Thr Leu Met Trp Phe Ile Ser Asn Lys Tyr Leu Val Lys Arg
130 135 140

Gln Ser Arg Asp Tyr Asp Val Glu Trp Gly Tyr Ala Phe Asp Val His
145 150 155 160

Leu Asn Ala Phe Tyr Pro Leu Leu Val Ile Leu His Phe Ile Gln Leu
165 170 175

Phe Phe Ile Asn His Val Ile Leu Thr Asp Thr Phe Ile Gly Tyr Phe
180 185 190

Val Gly Asn Thr Leu Trp Leu Val Ala Val Gly Tyr Tyr Ile Tyr Val
195 200 205

Thr Phe Leu Gly Tyr Ser Ala Leu Pro Phe Leu Lys Asn Thr Val Ile
210 215 220

Leu Leu Tyr Pro Phe Ala Pro Leu Ile Leu Leu Tyr Gly Leu Ser Leu
225 230 235 240

Ala Leu Gly Trp Asn Phe Thr His Thr
245

<210> 129
<211> 61
<212> PRT
<213> Homo sapiens

<400> 129
Met Met Val Ser Cys Ala Cys Glu His Leu Leu Glu Leu Arg Gly Leu
1 5 10 15

Thr Thr Ser Thr Arg Trp Pro Trp Leu Val Pro His Thr Gly Leu Val
20 25 30

Leu Lys Ile Arg Ser Pro Arg Gln Gly Glu Pro Gly Ala Pro Pro Leu
35 40 45

Ser Val Cys Leu Ser Pro Val Val Ser Leu Cys Cys Cys
50 55 60

<210> 130
<211> 17
<212> PRT
<213> Homo sapiens

<400> 130
Leu Cys Leu Cys Phe Cys Leu Ser Val Ala Met Ser Leu Val Ile Phe
1 5 10 15

Leu

<210> 131
<211> 40
<212> PRT
<213> Homo sapiens

<400> 131
Cys Pro Ala Ala Ile Ser Ala Leu Val Thr Ser Thr Leu Leu Ser Pro
1 5 10 15

Arg Asp Ala Thr His Trp Gly Ser Val Gly Glu Ile Ala Leu Gly Pro
20 25 30

His Ala Ser Ile Pro Gly Trp Leu
35 40

<210> 132
<211> 16
<212> PRT
<213> Homo sapiens

<400> 132
Cys Leu Pro Val Ser Leu His Val Ser Pro Cys Val Phe Leu Ser Val
1 5 10 15

<210> 133
<211> 8
<212> PRT
<213> Homo sapiens

<400> 133
Ser Leu Thr Gly Arg Asp Ala Glu
1 5

<210> 134
<211> 73
<212> PRT
<213> Homo sapiens

<400> 134
Met Asp Thr Glu Lys Ser Trp Ile Pro Arg Val Trp Leu Ala Leu Ser
1 5 10 15

Cys Pro Leu Val Ile Ser Glu Trp Phe Leu Ile Leu Cys Ile His Val
20 25 30

Met Arg Gly Lys Phe Pro His Asp Leu Leu Cys Phe Leu Ile Lys Leu
35 40 45

Leu Cys Pro Thr Ile Ala Gly Ser Ala Tyr Gly Cys Cys Asn Val Gly
50 55 60

Ser Ala Val Ser Cys Ser Tyr His Phe
65 70

<210> 135
<211> 88
<212> PRT
<213> Homo sapiens

<400> 135
Met Pro Leu Gly Cys Arg Glu Glu Ala Gly Gly Val Met Gly Met Gly
1 5 10 15

Ser Gly Arg Gly Arg Glu Gly Pro Ser Thr Lys Ala Trp Glu Met Arg
20 25 30

Gly Gly Gly Gly Arg Ala Gly Glu Ala Lys Ser Gln Pro Trp Arg Glu
35 40 45

His Pro Gly Ala Ser Val Ser Gly Tyr Thr Gln His Phe Ala Thr Cys
50 55 60

Gly Pro Ala Gly Ala Glu Asp Gly Gly Glu Glu Ala Ser Ser Pro Cys
65 70 75 80

Val Tyr Cys Arg Gln Lys Gly Leu
85

<210> 136
<211> 16

<212> PRT
<213> Homo sapiens

<400> 136
Val Phe Trp Phe Trp Gly Phe Cys Phe Val Cys Val Leu Phe Gly Leu
1 5 10 15

<210> 137
<211> 118
<212> PRT
<213> Homo sapiens

<400> 137
Glu Gln Asp Pro His Ala Ala Gln Pro Cys Leu Thr Arg Gly Trp Pro
1 5 10 15

Gln Lys Arg Val Gly Glu Ala Gly Gln Gln Gly Leu Ala Glu Ile Ile
20 25 30

Cys Arg Ala Gln Glu Ala Gly Glu Arg Arg Gln Phe Gln Gly Pro Phe
35 40 45

Val Arg Gln Val Pro Gly Ala Gln Pro Gly Arg Gln Glu Gly Leu Ser
50 55 60

Pro Ser Pro Arg Gln Glu Gly Ser Gln Ala Glu Ala Pro Pro Ser Gly
65 70 75 80

Thr Pro Gln Pro Thr Pro Ala Ala Leu Gly Pro Arg Leu Ile Lys His
85 90 95

Pro Pro His Gly Arg Gln Leu Tyr Leu Val Asp Arg Lys Ser Ala Ser
100 105 110

Pro Ile Tyr Asp Gly Thr
115

<210> 138
<211> 155
<212> PRT
<213> Homo sapiens

<400> 138
Thr Gly Ala Gln Glu Arg Thr Ser Val Arg Leu Thr Ala Arg Cys Cys
1 5 10 15

Thr Glu Asn Pro Gln Pro Glu Pro Leu Gly Pro Ala Gln Ala Arg Pro
20 25 30

Glu Lys Glu Gly Ala Gly Gly Arg Pro Ala Trp Gly Ser Arg Glu Ala
35 40 45

His Gly Met Glu Ala Gly Glu Pro Gly Gly Leu Gly Gln Pro Trp Asp
50 55 60

Gly Ser Trp Ile Glu Glu Ser Arg Gly Val Met Arg Val Pro Ser Gly
65 70 75 80

Leu Gly Ser Leu Leu Leu Val Ser Asp Pro Pro Pro Phe Ser Ser Gln

```
                85                       90                       95
Ala Leu Gly Ala Pro Gly Ser Glu Asp Ser Trp Glu Ser Ser Leu Arg
            100                 105                 110

Gln Val Gln Gly Gln Ser Ser Asp Pro Gly Pro Gly Leu Leu Trp Val
        115                 120                 125

Pro Met Asn Ser Ala Ser Gly Ser Glu Gln Phe Pro Ala Pro Leu Pro
    130                 135                 140

Glu Pro Ser Val Leu Trp Asn Pro Trp Ala Gly
145                 150                 155
```